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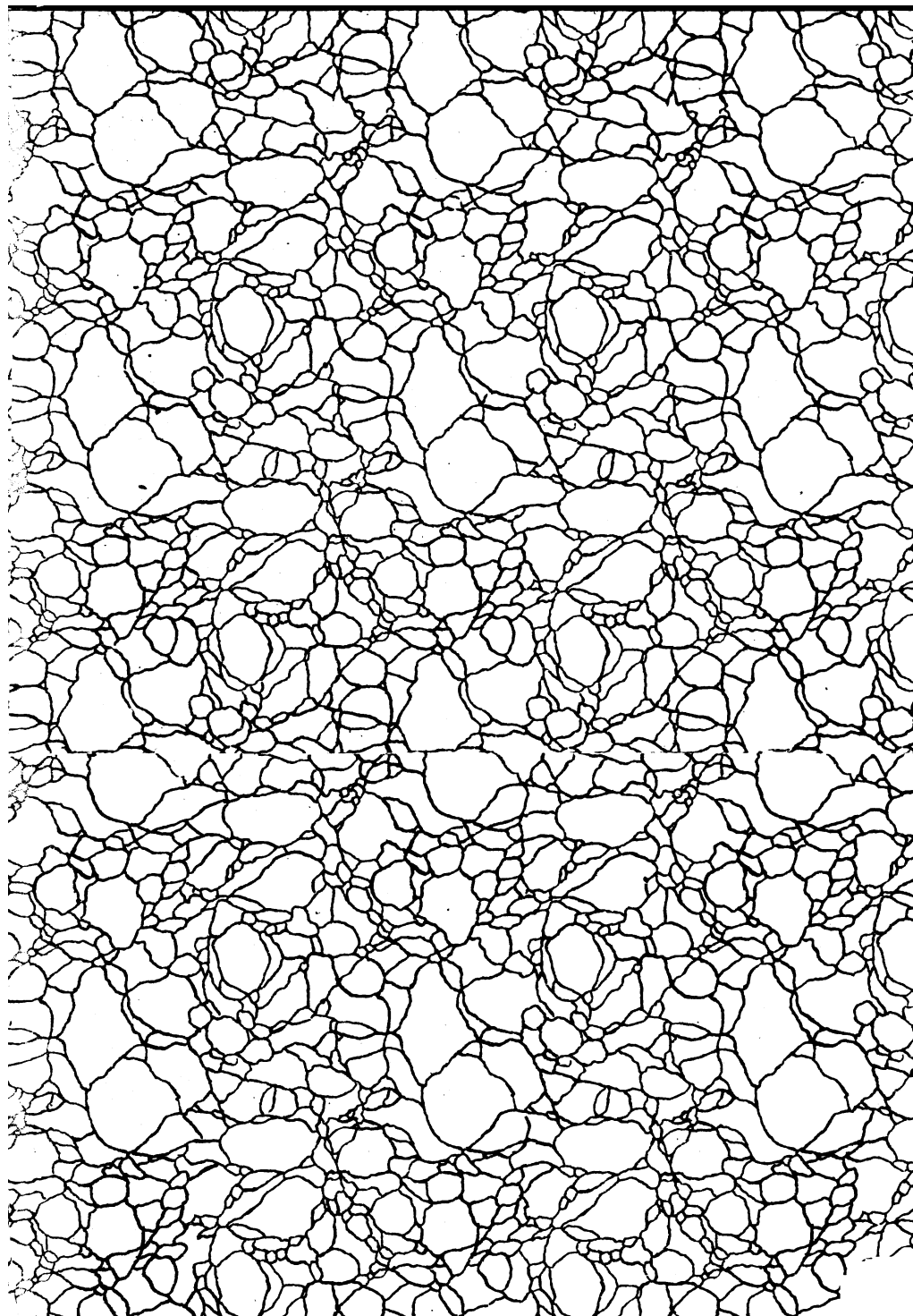


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FROM

Quarterly Journal
of Economics.

16 Oct. 1900.



VALICS

— OR —

THE SCIENCE OF VALUE

BY

GEORGE REED

*"Ye fools and blind; for whether [which] is greater,
the gold, or the temple [humanity or mankind]
that sanctifieth [maketh valuable] the gold?"*

Matt. 23: 17.

*"And, behold, I come quickly [suddenly]; and My reward is with Me,
to give every man according as his work shall be."—Rev. 22: 12.*

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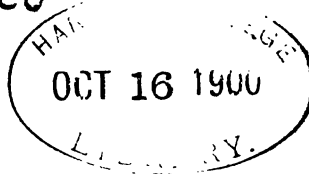
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PREFACE.

We know that we have thrown light upon the subject of value, shown the eternal foundations of a science, and added power to the machinery that shall yet destroy great wrong. We have taken up arms against that mental monstrosity, the gold standard, and we need help.

We look for assistance to our college brethren of the University of California, for whom we feel deep affection, as well as to college men throughout the world. We hope they will take up the subject in the spirit of reform, and lead in the attack against old errors, especially in regard to teachings upon the subject of what is called Political Economy. Public wrongs are but public errors, and true science is on the side of opponents of existing wrongs, and must and will triumph.

We feel that the graduates of our schools should be quick in the advance, for unto whom much has been given, much is expected, and it is not just that the energies of the state should be wasted in educating annual litters of mere value chasers. The state's men, especially her favored children, should know their duty to man and to God, which is to endeavor to make the world better, or what is the same thing, happier, and to endeavor to earn the crown of leaving it the better for having lived in it. But this applies not alone to men who have been taught in our schools (colleges are

but public schools that are supposed to be more advanced), and, indeed, such men would not have been particularly designated but for the fact that their duty ought to be clear. Outside of the colleges there must be vastly more talent than among those who had this accidental privilege, generally traceable to the ability of certain parents to maintain their children while at school. Therefore, all good men are asked to assist in the coming struggle of right against wrong, of light against darkness, of intelligence against ignorance, of humanity against despotism; and this can be done by an earnest inquiry for the truth; the faith in the harmony of science in things spiritual or in the field of morals, which necessarily will be accompanied by the conviction that an unjustly or inequitably-governed world is not of the plan of heaven.

It is a crime to attempt to establish the ignorance of the past against the reason of the present, and if precedent stands not as a bar against intelligent progress, the world may advance by unimpeded evolution, rather than by intermittent revolution or public shock, for in the past remissions of some of the worst public sins have been bought by the effusion of a great deal of the best of the public blood. This may be avoided for the future by putting no legal obstacles in the way of the moral progress of man, and by removing such as have been so placed.

Political Economy, Government, or true Politics as a science must rest upon the grand principle of common justice. Indeed, the people of the United States are particularly fortunate in the fact that in the beginning they announced this principle as the rock of their government, and it was also asserted by the faithful in a

long, bloody, desperate but successful war against our brethren in blood,—a people whose tendencies, as compared with those of other European nations, are lenient and liberal.

The American people in their Declaration of Independence declare that all men are (legally) equal, and endowed by their Creator with certain inalienable rights, and that government should exist only to secure such rights.

The trouble is that we, instead of making new conquests for liberty, are even retreating from the ditch so gloriously won of old by our half-fed, unpaid, hard-fighting, ragged regiments.

The American people did ordain and establish a Constitution for the United States of America, "in order to form a more perfect union, *establish justice*, insure domestic tranquillity, provide for the common defense, *promote the general welfare*, and *secure the blessings of liberty*, to ourselves and our posterity."

It is easy to see that in the United States no public wrong can be constitutional. The preamble of the Constitution of the United States and such a thieving scoundrelism as the law of the single gold standard are not in legal harmony. There is a note struck in this preamble and in that declaration that can never fail, and a Supreme Court that could not hear it would be fit for the devil's supreme tribunal in the government of hades.

May no honest and intelligent man before he has carefully investigated this matter say that we in our assertions are outside the pale of reason or have overstepped the boundary of right, and then we believe he can never say so. We know that we are doing our

duty to the country as we see it. We carefully distinguish between the sin and the sinner, and we do not suppose that the Supreme Court ever had the question put before it in this light. It will do this Court no harm to look a little into the matter of the natural right of men, for this exalted body enjoys probably the unique distinction of being the only tribunal on earth that is plainly sworn to uphold it.

This is a "business" age, and the time of the Supreme Court is taken up among "business propositions." The government of this country is a business proposition of the whole people. The memory of the fact that a business proposition should also be a moral proposition seem to be falling into "desuetude."

The bill proposing the monometalism of gold was a "business proposition" in favor of "business" men who knew their own "business," favored by a Secretary of the Treasury who did not know what ought to be his "business," and passed by a Congress who knew little or nothing of the "business."

It is now a law, defended by "business" politicians engaged in making grand-stand plays and shouting out the praises of exclusive gold money in what they call devotion to the country like so many dervishes screaming, "Allah illah Allah," in what they call devotion to the Creator.

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INTRODUCTION.

Valics, or the Science of Value.

At the very begining of this treatise upon Value, the reader is asked to make particular distinction between any commodity and its value; to remember that value is not the same thing as the material which is said to possess it.

A ton of wheat is one thing, its value is another. The value of a pound of gold is one thing, the gold is another, and though wheat is a very different thing from gold, still the value of wheat is not a very different thing from the value of gold. In fact, they are the same thing or different examples of the same thing (value), but value resides (if we may use the word) with more strength in gold than it does in wheat, that is, a pound of gold has more value than has a pound of wheat, and all value is of the same nature or source though very frequently of different degree, intensity or strength.

Pound for pound, the human race desires gold more strongly than it does wheat, bids higher for it or is willing to pay more labor for it; the value of gold is therefore comparatively greater than that of wheat, or gold is "dearer," or, pound for pound, buys more of the labor of man or represents more blood-power than does wheat.

The Science of Value we have named Valics, but as

Value is the *Medium of Exchange* among men, this science could appropriately be called the Science of Commerce or the Science of Exchange. Labor is paid by or with *Value*; the products of labor are exchanged by means of value; and this science could properly be called the Science of Labor; therefore it is apparent how transcendently important its principles are to those who labor, especially to wage earners, hirelings, salaried men or "professional men," and how favorably a perfect knowledge of its principles must affect a useful world, for no government can be sound whose financial legislation is not built in harmony with the proper understanding of these principles.

All commercial debts are paid with material gotten by labor, therefore the debt of the world may almost be called the sin of the world, a burden resting heavily upon useful mankind, "the white man's burden," which to a fearful extent is demoralizing Humanity, repressing Progress, retarding Civilization, and brutalizing Mankind, where Science is humanizing, refining, and elevating in such manner that our progress is almost the Progress of Poverty. As this debt is practically an obligation to deliver gold, the obligations to deliver other materials being insignificant, and as this argument logically followed must lead to the destruction of the gold standard theory and the extinction of the "octopus" or "money power," therefore it is fraught with most important consequences. The distribution of wealth or value is manifestly unfair and present conditions or systems must be wrong. The word "Wealth" in this case means value. The meaning of the word wealth is sometimes indefinite. At times those who

employ it mean value and then again they mean weal, welfare, well being, but much that is conducive to welfare may sometimes be bought with value, so there is generally some confusion regarding the meaning of this word wealth; in this treatise there is none, and we think none regarding the meaning of any other greatly important word. The Science of Value, as we take it, is included within the science of Political Economy; we think that the latter means more than does the Science of Value, though some would reduce its scope to what we have termed *Valics*. A common and very frequently accepted definition of Political Economy is the following, viz.: "That branch of knowledge which treats of the nature of Wealth (Value) and the laws of its production and distribution." A famous modern political economist (Nicholson) says, "The economist regards man as a being who produces, exchanges, and consumes wealth (value), and considers him as a member of society, one of the objects of which is to deal with wealth" (value). A Swiss economist, Sismondi, with the pleasant directness and clear vision of a man and a brother, defines Political Economy as "the Science of Human Happiness," and we agree with this, but in this case the word "human" means all mankind,—the science of general happiness or of public prosperity.

Professor Adams says "Political Economy treats of Industrial Society. Its purpose as an analytical science is to explain the industrial actions of men. Its purpose as a constructive science is to discover a scientific and rational basis for the formation and government of industrial society." Ruskin defines Political Economy as the "system of conduct and legislation which should

multiply human life at its highest standard," which is true.

If it is a science it must be the same everywhere. There can be no exclusively "American system" of truth. Political Economy is the science of public welfare and might almost truly be called the Science of Public Morality, as seeking to formulate laws that shall do justice between man and man, and in this case it is almost if not quite the same thing as true Religion, for men can not sin against man or mankind without sinning against Heaven, and these sins are sins against the Holy Ghost; they are unpardonable; that is, they are always expiated, and mankind is retarded by them; they are burdens that are carried until thrown off. Such sins are slavery, gold monometallism, and other forms of special privilege or monopolism, or the giving to private individuals of that which by moral law (we being equal heirs) belongs to us equally, and to which private individuals (by the same law) can never logically acquire exclusive title. Government can not steal but it may furnish methods whereby some men may unjustly take from others or prevent others from acquiring. (We are not talking of stealing or of thieves in the ordinary sense. This argument does not presume that any man is a lawless thief.) The Science of Political Economy being the Science of Public Welfare, is the science to which all others are subordinate. Among these we account Valics or the Science of Value. Political Economy would then seem to be solicitous for, or interested in, the soul of man, the spirit, the Immanuel (the intelligence or God within us), that essence within us which was at the beginning and in which, according to the

theory of many, we partake of the Creator of the Universe, and which is receiving power or truth from the Fountain head, and among us is unfolding, strengthening, advancing, expanding.

What shall be the end, or why we should take this journey, we know not, but we feel that we should take the right road, so that the human race may advance pleasantly and rapidly, and there is vast hope for the future, for from the crudeness of the past, in spite of much stumbling and erroneous direction in the darkness of ignorance, and under a cloud of crime, we have advanced to where we are now; and from where we are now, if we but proceed in the right direction, we may go forward with astonishingly accelerated rapidity, and this advance will be due to Science, the Spirit of Truth and Comforter of mankind. It seems to us that were the Divine will done upon earth or by mankind as it is in heaven or throughout nature or throughout space, where worlds eternal move in unerring harmony, then would the "Kingdom of Heaven" be "at hand."

It is the province of Political Economy to discover this will, this harmony, this rule of action, that the laws which govern us may be formulated in accordance therewith, for we believe that the happy way is sternly logical and strictly just, and that we should demand that justice be done among men, but we can discover what is just only by the dispersion of error, or, as it is said, by the "discovery of truth," and it is, we believe, by this that the greatest happiness to mankind or to the human race may be brought about; and the love of God, or Science, is inseparable from the love of man or humanity; wherefore universal justice and exact science are in accord,

and "the real use of all knowledge is that we should dedicate that reason which was given us by God, to the use and advantage of Man." (Bacon.) Therefore we believe the science of Political Economy to be a great moral science, grander and broader than the Science of Value, which it includes, and that the word "valics" explains what is meant by the Science of Value, or of Commerce, or Exchange, or Property, or Labor, and is as good a word as Physics, Mathematics, Statics, Dynamics, Music, Logic, Aquatics, etc.; although perhaps not properly Greek, nevertheless the world needs it and its utility gives abundant reason for its being.

Value comes from old French *Valu*, from *Valoir*, to be worth, a descendant of the Latin *valere*, to be strong, to be worth. Political Economy is derived from three Greek words, one meaning state, or public or people, another household, and a third law, custom, or regulation, the science of public housekeeping or of the housekeeping of the state. This strikes us as being a very good description of the practical application of the science, and as being more than the Science of Value, or an investigation of the phenomena and laws of "wealth" (value).

CHAPTER I.

Value and Price or Relative Value.

For the purpose of beginning our investigation, value is sufficiently defined by the expression "purchasing power," very commonly used.

In investigating this subject, let us from the beginning be especially careful and faithful in the apparently small things of fact, that we may become masters of the great things of science or theory. Differences where there is no distinction made, and distinctions without essential difference, must be carefully sought out and detected.

We shall deal in this treatise only with substances sold by weight, money being such a substance; at least such is our conception of money. We consider the money of the United States of America as the minted gold of the United States, and do not regard the silver, nickel, copper, and paper tokens of the United States as money, although to men in the market-place they may be as "good" as money or willingly accepted in place of the money they represent. This subject of token metal and paper will be taken up later under "Coin, Counters, and Paper Money." Utility and value should not be confounded, they have been called "value in use" and "value in exchange." We are dealing with value in exchange, and in this work the word value will

ordinarily mean value in exchange or purchasing power.

Value is something that can be dealt with mathematically, that is, it can be compared with mathematical accuracy, but utility can not. It can only be compared generally, and usually opinionatively. We can hardly say that printing is of more utility than sewing, or the pen more important than the needle, or that a hammer is more useful than a drill, or a knife than a spoon, or if it should be that one thing is more useful than another different thing, we can hardly say that it is twice or three times as useful, but we can say that United States gold money is more valuable comparatively or relatively than lead, its purchasing power per pound is exactly so much greater than that of lead at a given price per pound. Some things have great utility and little or no value; such, for instance, is water. "An article may be possessed of the highest degree of utility or power to minister to our needs or enjoyments and may be universally made use of without possessing exchangeable value." (McCulloch.) The value of the lands of the United States is very great, but their utility to the nation is certainly not increased by their great aggregate value. It may add greatly to the "wealth" (value) of the nation, but not to its "wealth" (welfare).

It most certainly does not add to the "wealth of the nation," that is, if wealth in this sense means welfare. "Value is the power to command commodities generally." (A. L. Chapin, in Johnson's Encyclopedia.) "Value is the generic term which expresses power in exchange." (F. A. Walker, Political Economy.)

The public parks of the country are not for sale, and their value may be called nothing; their utility, however,

is not decreased because of this fact. The utility of diamond as compared with iron is apparently not very great, although considerable because of its hardness, and perhaps more because of its ornamental quality. Nevertheless, its value is very great. It is an exceedingly valuable substance, and bears a very high price. It is purchasing power we are treating of, and as a matter of fact it can be proved, contrary, perhaps, to the usual impression, that utility in general, or public utility, which is the utility of the Political Economist, or the utility as it applies to the public welfare, rather varies inversely to the value. That is, an article becomes more generally useful as it becomes cheap, or the greater the value the less, generally speaking, is the utility. If window panes were worth \$10 each they would be useful, and at 10 cents each they are more generally useful or of more public utility. They would thus add more to the general happiness, would affect mankind more favorably. As things lose their high value they become more generally useful, but they do not lose their utility. On the contrary, they are useful to more men. A thing not in trade at all may be of great utility, for example, a park, a college, a public water works, all built by labor. Advance or civilization should mean the cheapening of articles as measured in labor. This conduces to the public welfare, and Political Economy is concerned in the public welfare. She is by no means a bedizened courtesan in the court of a gold standard, despotism, but is the cherishing mother of the Laborer of the world.

The breaking down of value is in some sense the task of civilization. As good things are cheaper, a greater proportion of the people may enjoy them, and herein

lies the benefit of improved machinery methods and processes, it being a truth that political economy or true progress is interested in the greatest possible return of blessings for the labor employed, in the largest return in human happiness for the exertion used, in the economy of the labor of man; for good things should be cheap as measured against the labor of men, as weighed for the blood of industry, the most precious coin we have.

PRICE AND RELATIVE VALUE.

As we have stated that by the word value is meant purchasing power, it is now in turn to explain the distinction between value and price.

Speaking generally the price of anything is that for which it will exchange or does exchange in trade. If a bushel of wheat sells for a pound of soap, then the price of a bushel of wheat is a pound of soap, and the price of a pound of soap is a bushel of wheat. If 8 pounds of onions exchange for 12 pounds of potatoes, then the price of 8 pounds of onions is 12 pounds of potatoes, and the price of 12 pounds of potatoes is 8 pounds of onions. That is to say, it is utterly impossible to mention one price without mentioning two, and the one is the equivalent of the other, or the price of the other, or at least exchanged for the other in that exchange or trade.

Now suppose such trading as the above goes on indiscriminately, then it is called *barter*. It is said to exist to this day in certain portions of the interior of Africa.

It is trade without reference to or comparison with

the value of some particular standard commodity which we call money. It still remains true even where money is used that one price can not be mentioned without mentioning two, one of which gives the price of a commodity in money, and the other gives the price of money in this commodity.

For instance if wheat sells for \$1.00 per cental, the price of 1 cental of wheat is \$1.00 and the price (in wheat) of \$1.00 is one cental. When a man goes to a butcher shop and buys beef he sells money; at the same time the butcher buys money and sells beef, though token coins be used, for the token coins are as "good" as money, because convertible, and trade in the United States is on a gold "basis."

So that in every transaction of exchange in trade each man not only buys, but he at the same time sells, or a man can not sell without buying nor buy without selling. Every sale shows a purchase, and every purchase shows a sale, so that to understand the theory of trade, both sides of the shield must be seen. Prices are ordinarily given in money units or unit weights of money, and hereafter in this treatise it will mean the price in money, the equivalent in money, the quantity of money for which a thing exchanges, the same as our market prices.

"Price" is the expression for the quantity of value, and is the weight of the equivalent in the material money. Among substances sold by weight, price is the statement of the weight of money that is equivalent or equal in value to a given weight of some commodity. To say that the price of anything is \$1.00 per pound, is the same as saying that 25.8 grains of U. S. money

is equivalent to 1 pound, or 7,000 grains, of the other commodity.

Value is purchasing power, that particular subject whose phenomena we are investigating. As an analogous example, your weight is the quantity of your gravity as expressed in unit weights or pounds, but weight or gravity is the subject whose laws or phenomena were investigated by Newton.

Money is often called the common denominator of exchange, as it is the substance by whose value is expressed the value of all other substances in trade. They all exchange for so much money per unit. If there were only two commodities in the world we would hardly know which were money, but if there were three or four it would be the one which we would say or might say did not fluctuate in value, the one that had apparently a stable value and really an inalterable price as reckoned in itself, but as judged by any other as a standard it also would fluctuate in exactly the same measure but in the opposite sense, that is when one went "up" the other would go "down."

However we have not two commodities, but we have many, and one is mentioned in every case of valic or commercial comparison, and that one is money.

As the prices of all things are stated in money, and as money is a thing sold by weight, as are all these other things (of which we are treating), so there must be some definite mathematical relationship in every exchange, and there is. This relationship we purpose to show, and herein exists a *most important* step in our argument, and the reader is asked to *attend most carefully* to the following reasoning.

The weight of money is always given in every price, and if the weight of any commodity exchanged for it be also given, then we have the weights of two articles exchanged for each other, and can see how much heavier the one is than the other, or how much more valuable the latter is than the former. This latter is the relative value existing between the two commodities, and the former is the ratio or relative weight.

We naturally take the money and weights of the U. S. for illustration, the ordinary unit weight in the U. S. being the avoirdupois pound, consisting of 7,000 grains; the unit weight for the purpose of weighing the money of the U. S., which is its coined gold, is the weight of the U. S. dollar, being 25.8 grains, by which weight the money of the U. S. is bought and sold or accounted, being the account unit for the money of the U. S.

It is clear that if we divide 7,000, which is the number of grains in an avoirdupois pound, by 25.8, which is the number of grains in a U. S. dollar, we shall get a result which will show how many gold dollars there are in an avoirdupois pound of the money of the U. S.; this result is $271.3178\frac{7}{8}$. This number or result also shows a great deal more, viz., it shows that one pound of U. S. money will buy $271.3178\frac{7}{8}$ pounds of any commodity which sells at \$1.00 per pound.

If the above be true, it will buy 100 times as much, or $27131.78\frac{7}{8}$ pounds of any commodity, at the price 1 cent per pound, and we are enabled to tell how many pounds of any commodity may be bought for a pound of U. S. money at any price in cents per pound; and below we have partly constructed a table which shows what we have explained.

With a pound of U. S. money or the gold coin of the United States you can buy of any commodity, selling

At	1	cent	per	pound.....	27131.78 $\frac{1}{8}$	pounds.
"	2	"	"	"	..... 13565.89	"
"	3	"	"	"	..... 9043.92	"
"	4	"	"	"	..... 6782.94	"
"	5	"	"	"	..... 5426.35	"
"	6	"	"	"	..... 4521.96	"
"	7	"	"	"	..... 3875.96	"
"	8	"	"	"	..... 3391.47	"
"	9	"	"	"	..... 3014.64	"
"	10	"	"	"	..... 2713.17	"
"	1-2	"	"	"	..... 54263.56	"

The first number above is absolutely exact, and the others are correct as far as they go decimally.

The above numbers are the ratios at the given prices. Ratio among substances sold by weight is practically a statement of price. They are logically the same thing, and there is no true ratio among substances not sold by weight. In illustration, we subjoin a partial table of ordinary prices, which correspond to given ratios as the above are ratios corresponding to given prices. It is noticeable that the price of U. S. money is always \$271.-3178 76-258 per pound, nor does the price of any money ever vary. If it should be said to vary, it is because it is no longer reckoned in itself, and is no longer money.

The price of any commodity in U. S. money at the				
ratio	1 is	\$271.3178 76-258	per pound	
"	2 "	135.6589	"	"
"	3 "	90.4392	"	"
"	4 "	67.8294	"	"
"	5 "	54.2635	"	"
"	6 "	45.2196	"	"
"	7 "	38.7596	"	"

ratio	8 is	\$ 33.9147	per pound
"	9 "	30.1464	" "
"	10 "	27.1317	" "
"	16 "	16.9573	" "
"	100 "	2.713178	" "
"	1000 "	0.2713178	" "
"	10000 "	0.02713178	" "
"	27131.78 76-258 "	0.01	" "
"	1-2 "	542.6356	" "

It is noticeable that the price of anything at the ratio 1 as compared with U. S. money must be \$271.3178 76-258 per pound, while any ratio greater than 1 means a price less than this, and a ratio less than 1 means a price greater than this.

By looking at this table we see that every price, among articles sold by weight, shows a relationship by weight. This is understood in the contention of the bimetallists of the U. S. They mean a ratio by weight of 16 to 1 as compared to U. S. gold coin, or that 16 pounds of silver by weight shall be equal in value to 1 pound of gold. It makes small difference as to the ratio whether they mean to compare pure silver to pure gold or standard coin silver 900 fine to standard gold coin 900 fine. In the latter case you have some extra copper thrown in; we take it that they mean to compare coin silver to coin gold, and the one thing they are particular about is 16 to 1, which in this case would mean a price for coin silver of \$16.9573 per pound. They demand "the free and unlimited (unrestricted) coinage of both silver and gold at the present legal ratio of 16 to 1," which legal ratio is not exactly 16 to 1, and that the silver dollar shall be a "full legal tender, equally with gold, for all debts, public and private."

In the table above we have not said "16 to 1" or "1 to 1" or "2 to 1" but simply the "ratio 16," the "ratio 1," the "ratio 2," because it is always understood that this comparison is with the ratio 1 or unity, and so much verbiage is unnecessary as the ratio of 16 means the same as the ratio of 16 to 1, etc.

The ratio also always shows the relative value, silver to gold at 16 to 1 by weight means silver to gold at 1-16 to 1 by value, or gold 16 times as valuable by weight as silver. It is plain that we can not have ratio or relative weight without having relative value. As surely as a needle pointing to the north also indicates the south, so surely does the ratio always indicate relative value. We can not have one without having the other, and they are always the inverse of each other; for instance, if the ratio of any commodity be 16, its relative value must be 1-16.

They both invariably go together, and the above table is a table of ratios, as it shows the ratio by weight at a given price. It also shows the relative value, for the one is the inverse of the other, or one divided by the ratio by weight, ordinarily called simply "the ratio," gives the ratio by value, or the relative value (which we would like to name the valence), and a table of relative values (or valences) were it constructed would be exactly like the above if we made every ratio a denominator whose numerator were 1. Thus the relative value of anything selling at \$1.00 per pound would be 1 divided by 271.13178 76-258. It is somewhat inconvenient to print such a table, and the above serves the purpose perfectly well, for it is only necessary to invert the ratios to convert them into relative values. By such a table

the value of all commodities is compared to the value of money, for the relative value has nothing to do with the particular material of the commodity. Cherries at 2 cents a pound, plums at 2 cents a pound or asphaltum at 2 cents a pound, all have the same relative value, and if the value of all commodities is compared to the value of a single one, then are they all intercompared or compared to each other, on the principle of logic that if Jack is twice as heavy as Jim, and Jim is three times as heavy as Bob, then Jack is six times as heavy as Bob. There are many rules and relationships that become apparent upon the study of this table, for instance, the weight of any commodity multiplied by the relative value of the commodity gives the weight of the money that will buy it. When we use the word "ratio" in this treatise it shall mean the relative weight of the commodity as compared to the ratio or relative weight of money (which is always 1), and whenever we use the term relative value it shall mean the relative value of the commodity as compared to the relative value of money. (The relative value of money is always 1.)

The minted gold of the U. S. which is reckoned in dollars is a substance having great value, that is, it is worth \$271.3178 76-258 per pound, therefore the relative value of by far the greater number of substances in trade as compared with the relative value of money, which is 1, would be less than 1, or fractions of 1, though there are a few substances worth more than money by weight, and the relative value of these would be greater than 1, but the price of U. S. money is always \$271.3178 76-258 per pound, therefore its relative value is always 1. Its price never changes; its relative value never can

change, as it is compared with its own value as a standard and it matters not how much its own value (command over labor) may change, its price or relative value never can; it must ever always be 1, and if we invert this, 1 divided by 1 is 1, it follows the ratio of money is always 1. This is true by similar reasoning, not only of American money, but of any money in the world, so it is a general truth that the relative value of money is always 1, and this points to a definition of money as being that substance whose relative value is always 1, or whose value is the standard for the comparison of value. The ratio of any merchandise more valuable than money must always be less than 1, and the ratio of any merchandise less valuable than money must always be more than 1.

We must conceive of money as we do of wheat, or any other merchandise. When we think of wheat, we do not think of a pound of wheat or of a bushel of wheat, but we think of wheat generally as a merchandise. A quantity of U. S. gold coins piled upon a table is money, and this merchandise is weighed, sold, and accounted by a definite weight, called a dollar.

This weighing is done at the mint, and this fact is certified to upon the ingots or coins themselves.

There is a difference between money and wheat, which is that there are different qualities of wheat, bearing different prices, even in the same market at the same time, but there is strictly only one quality of money; it is all exactly alike, and is what it purports to be when honestly made, as it is by all the advanced nations of the world. In the United States it is always manufactured of an alloy 900 Au. and 100 Cu., an inti-

mate mixture or. bullion 9-10 Au. and 1-10 Cu. as minted by the U. S. It is evident that the ratio of any substance multiplied by its relative value is always 1. At 16 to 1, 16 multiplied by 1-16 is equal to 1. At 1 to 1, which means at the price of the standard money, which is always \$271.3178 76-258 per pound, we have 1 multiplied by 1 is equal to 1.

In this fact money bears the same relation to other commodities in the matter of relative value that water does to other substances in the matter of specific gravity.

The specific gravity or relative weight of water being the standard of specific gravity is always 1; also its relative volume is always 1. If a substance should have twice the specific gravity of water, or have a specific gravity of 2, then it would have a relative volume of 1-2, that is, the same volume would be twice as heavy or the same weight would be 1-2 as voluminous, and 2 multiplied by 1-2 is equal to 1.

The specific gravity of any substance shows how many times it is as heavy as the same bulk of some substance taken as a standard. It is the number which multiplied by the weight of an equal bulk of the standard will give its own weight, or in other words, it is the comparative (relative) weight of any substance. In ordinary every-day life the standard taken is usually water. The specific gravity of silver as compared with water is 10.5, because a cubic foot (or any other volume) of silver is 10 1-2 times as heavy as the same volume of water, while cork weighs less than 1-4 as heavy as water, its specific gravity being only .240.

The force of gravity is invariable, that is, the density or specific gravity or relative intensity of the force of

gravity in any substance is invariable, or at the same place it is the same for all time, for instance, the specific gravity of mercury at the sea level is 14 and it will stay 14.

Note.—There is a difference between specific gravity and relative value, viz., the specific gravity of any substance, as copper, lead, or any other, is constant with time, the same yesterday, to-day, and to-morrow, and subject only, as it may be said, to the will of God. Whereas, the relative value of a commodity varies or is different at different times, being subject to the laws of trade or rather to the varying wants of man.

This variation is indicated in the fluctuation of prices, and is due to changes in the relative power of value in different commodities, and even the intensity or strength of the value of the standard commodity (money), though always mathematically unity or 1, is itself a variable. This will be demonstrated later. And, though in this demonstration value will be considered as an essence or force residing within or permeating all commodities, which as price goes up becomes relatively more intense or stronger and *per contra* weaker as it goes down, or, in other words, which is variable or different at different times, and which in different merchandise at the same time is stronger or more intense in some commodities than in others—for instance, the force of value residing in any substance selling at 10 cents per pound is considered as ten times as intense as that residing in a substance selling at 1 cent per pound—nevertheless, it is very clear that value does not in truth and in fact reside in or permeate the merchandise, but does reside, as we may say, in the mind of men, or is the resultant of influences over many minds.

The fact that a thing sells for 10 cents per pound shows that the desire of man for 1 pound of it is 10 times as strong as his desire for 1 pound of any sub-

stance selling at 1 cent per pound. He will do 10 times as much labor for it, and man's desire in trade for anything is only measured by the labor he is willing to do for it (or, what is the same thing, able to cause to be done for it), for desire alone without the offer and acceptance of labor or what will buy labor, does not affect prices. Wishes are not horses, and a beggar's longings in the market place would never fit out a cavalryman.

Science may (and probably will) show later that weight is not an inherent quality naturally resident in matter, but is a state or attribute of matter due to some extraneous, and, to us, supernatural cause, as we say "the will of God" or the mind of the Creator. These things are now subjects only of intelligent speculation or scientific guessing, but will become clearer and clearer as science advances. It seems to me that if the motion orbital and axial of all celestial bodies were stopped, then there would be no weight, no gravic centers, like the centers of the earth, of the sun, etc. Matter would be released and set free, homogeneously filling all space, and space would be void of the ponderable substance which we call matter, a cold, dark, dead, ethereal immensity coinciding with the description, "The world was without form and void, and darkness was on the face of the deep." The worlds, we suppose, were formed of the volume surrounding each gravic center, each one taking its proper place and quantity of matter or volume of primal ether. Therefore by this reasoning we can hardly expect that any element will be found in any celestial body which is not also found in the earth, and if it should happen that any such there be, we should expect such elements to be found at the centers of the suns and larger planets, and not on their surfaces nor among the asteroids, etc.

Possibly the time of rotation around its axis as well as of the journey in its orbit has something to do with

weight upon any celestial body, and it is not necessary to suppose that because a planet has, for instance, 10 times as much matter as the earth, therefore any object placed upon its surface would have 10 times the weight that it has upon the surface of the earth.

The first change would be brought about by motion and simultaneously intense molecular agitation (heat), of which light is a manifestation. So the *fiat*, "Let there be light," would naturally be the first step of the change, wherein nothing was created in the sense of having been originated or made of nothing, but where the state was changed and for the old equilibrium of darkness, inertia, and death, we have the new one of light and life, and of countless planets moving in harmony to the tune of an exact mathematical scheme. However this is speculation. Our object is the investigation of the phenomena of value.

Value in the U. S. is expressed in dollars, or measured by dollars, and too much care can not be taken to distinguish between what is called by some writers the "thing dollar" and the "value dollar."

The "thing dollar" is an absolute and unchangeable quantity of a definite material which is 25.8 grains of the minted gold of the U. S. and called a dollar. The "value dollar" is the value of the "thing dollar," and this amount or quantity of value is the unit of value used for measuring value in the U. S. and sometimes called a dollar's worth.

You can not report or repeat or give any market price without mentioning 2 articles of merchandise, but value can be mentioned without mentioning 2 articles of merchandise, for instance, the expression "to the value of \$2,000" means as much value as is contained in 2,000 gold dollars. You can not report or give spe-

cific or relative gravity without mentioning two substances, to say that the specific gravity of mercury is 14, means as compared with the standard, *water*, but you can mention weight without mentioning two substances, for instance, a weight of 2,000 pounds means a weight 2,000 times as heavy as the standard pound weight, the original of which is deposited in government archives and faithful copies of which are numerous. Every indefinite or infinite thing must be enumerated or quantitatively expressed by comparing it numerically with some definite or arbitrary quantity of its *own kind* called a *standard*, which is always a mathematical unit or unity. Every human standard is arbitrary, inasmuch as it is artificial or selected or wrought by man.

Time is measured by definite time, as 1 hour.

Length is measured by definite length, as 1 foot.

Surface is measured by definite surface, as 1 sq. foot.

Volume is measured by definite volume, as 1 cubic foot.

Weight is measured by definite weight, as 1 pound.

Value is measured by definite value, as 1 dollar's worth.

Relative value or price is compared by a comparative value, which is the value of money per unit weight, as \$1.00 to the 25.8 grains.

Relative weight or specific gravity is compared by a comparative weight, which is the weight of water per unit volume, etc., as 1 gramme to the cubic centimeter.

The very word "intensity" or "strength" denotes comparison. To say that heat is very intense shows that there is much of it within a certain space; to say that a man is strong means much vital energy for his size or

weight; to say that a thing in trade is very precious is to say that its price is high or that it is very valuable for its weight. But we do not seem to be able to say that 1 length or 1 surface or 1 volume or 1 minute of time, is stronger than any other length, surface, volume, or minute.

Value must be measured by measured value; it can not be measured by metal. The standard of value must be of value itself and will be. So that the gold monometallists who scream for a "single standard" all over the world, or the universal single standard, will have what they say they want, whether or no, and could not get rid of it if they tried, whether the money be gold or silver, for any standard value will necessarily always be of value.

The measure of value in the U. S. is the value dollar, or the "dollar's worth," being always the value of 25.8 grains of the minted gold of the United States; and this is always true, whether gold be easy or difficult to obtain. While the prices of other commodities in the United States fluctuate, that of the gold dollar never does, for it can not, as its value is the standard, for a thing compared with itself can not change, for it can be neither larger nor smaller, weaker nor stronger than itself.

Of value, the standard of value must universally be; therefore, the expression that "25.8 grains of gold shall be the unit of value," is false and impossible, the Congress of the United States to the contrary notwithstanding.

Part of the first article of the new monetary law, intended to eternally confirm the horror of gold monometallism upon the long-suffering and patient people of

the United States, reads as follows, "That the dollar consisting of 25.8 grains of gold 9-10 fine established by section 3511 of the Revised Statutes (from the law of 1873) shall be the standard unit of value." A law commanding an impossibility is void, and as to the intention, it is against public morals and therefore manifestly counter to public policy. This law was confirmed March 14, 1900.

When it is necessary to distinguish we shall call the "value dollars" value units and the "thing dollars" we shall call money units.

A value unit is the value of a money unit, and a money unit is usually called in English books a "money of account" and sometimes a "unit of account."

Accounts are kept in value units but balances must be settled in money units. A prosperous business is one in which the owners are increasing their possession of value or gaining in value, or as it is termed "making money." It is easy to see that the number of value dollars in any country may exceed the thing dollars by millions upon millions, and such is the fact in the United States, as even the yards of cloth exceed the combined length of all the yardsticks, or the pounds of merchandise exceed the combined weight of all the legal pound weights in the United States.

Debts expressed in money units must be paid in money units in which the account was kept, or something equivalent or as "good," which will be something with which these can be obtained, but in fact the obligation is the payment of the actual material money units themselves, if they be demanded, even though these should be delivered by the United States Govern-

ment instead of the primal debtor, as the Government of the United States should keep its various tokens, either paper or metal, at par, and there is only one sure way of doing this, which is to put the gold up for these metal and paper tokens whenever it is required. For this reason what we call simply money, which is the gold coin of the United States, is, by some, often called "money of ultimate redemption," "primary money," etc., as such men do not make the strict distinction that we do, and they recognize paper as money as well as token coins and call them "credit money."

Strictly speaking, and especially for the purpose of scientific investigation, we do not recognize anything as money in the United States except its minted gold.

"Credit money" we would not call money at all, but regard it rather as the sign of an obligation, and would rather call it "debit money," or the confession that money is due, and we would in nowise confound the material with the written or printed obligation to produce it any more than we would confound the body of the prisoner with the writ of *habeas corpus*.

No quantity of value can be delivered in hand unless it be delivered in material, for we can not deliver the soul without delivering the body. This does not mean but that certain rights are valuable, but it will be found that these rights are methods of obtaining some valuable material, very frequently by taxing it out of the people, as, for instance, monopolies of various sorts, and very frequently in these the future is enslaved for the benefit of some company of men for 50 or 99 or 100 years or forever. Our people tamely, unquestioningly, submit to such outrages. However, this subject,

though within the domain of the science of value, does not bear directly on the discussion concerning the nature of value and the function of money which this treatise endeavors to elucidate more particularly in order to show the first and most prominent and general wrong, the head and front of other wrongs, which, when vanquished, will leave the others to be taken up and slaughtered in detail.

Recurring to our subject, in our conception any true money must be "sound" money and must be "honest money," but it is not necessary by any means that it should be gold money, for a silver money *must* be just as "sound" and just as "honest" and a good deal more conducive to the interests of the industrious or worthy world.

Though accounts may foot up to, or show millions upon millions of dollars worth of "business," and the balances be comparatively small, still however they must be settled in money units of the value units in which the account is kept. If the account is kept in "value dollars" or value units, the balance must be paid in money units or money dollars, which are definite unchangeable things, or what amounts to the same thing in something acceptable to the creditor, which will usually be something with which the money units may easily be obtained, for the two, while the account was running, were practically under such a contract, and the one who came out debtor might have resulted creditor. This account was run under a practical mutual prearrangement, which should be lived up to to the very ultimate letter. This is the moral obligation; we are not discussing the legal *status* of insolvent debtors, nor

what equity might direct should be done in special cases or cases of special hardship.

Money borrowed is the same as any other material borrowed, and is repaid by the return of the material borrowed, and carries with it no further obligation, the political economists of the world to the contrary notwithstanding. There is no obligation, either moral or written, to make that commodity more or less valuable than it was before, and those debts are honestly paid by the tender of the material borrowed, whether a ton of it would pay a scrub-woman for a day's labor or would buy a nation. Workingmen, the industry of the nation, should not be held down by these assistant cutthroats, in order to be more artistically butchered. An account may have on each side *items* or charges and credits to the value of millions and exactly balance, not a dollar changing hands, but this is no argument for the gold standard or for any other. In the United States "value dollars" or value units in debits and credits are constantly balanced against each other in this way to the extent of thousands of millions. Thus it is said that "credit" takes the place of money, but it is rather "debit;" if you owe me 10 millions and I owe you 10 millions our accounts balance, neither owes the other. So it is in a running account. This is the "credit" system that the gold monometallists talk about in saying that the greater part of business is done through "credit" and therefore little actual money is needed, and that gold is plenty enough and almost too cheap for the good of the people. The "best financial opinion," or the opinion of the most prominent financiers and their economists in the great colleges, seems to be

almost unanimous that civilization, honor, honesty, progress, commerce, and government can only be built up upon the foreordained gold standard, and more bosh that passes for science has been written in favor of the gold standard than was ever written in favor of any other economic delusion that ever took possession of the minds of men.

Now as the gold man says business is nearly all done on "credit" and with "forms of credit," and that the little "actual" money ought to be gold, so the paper man comes forward and says it ought all to be done on "credit," and therefore no gold money is needed, not even to settle balances with, just "fiat." The government only had to say, through the agency of its printing press and bureau of financial signature, "Let there be money," and there would have been (money), and if more were needed, why, more "stamp of the government" galore, "legal tender for all debts, both public and private."

These arguments about credit neither help nor injure the gold standard. *Value evidently is the medium of exchange* and is accounted in "value dollars" or value units, each of which always is the value of a money unit.

Business would be done or commerce carried on in this manner whether gold or something else were the commodity of standard value or the money. If all the gold in the world should instantly sink out of possible reach, it would not decrease the facility of commerce.

CHAPTER II.

The Theory of Value.

We propose to elucidate or make clear the theory of value and the phenomena of the price or prices of commodities sold by weight by the following diagrams, and in explanation let us say that value may be imagined as dissolved in various commodities in different proportions, price or relative value giving the comparative strength of each solution. Among these commodities is money itself, which is the standard solution or the solution of standard strength.

These solutions vary in strength among themselves, and the same commodity has more and less value dissolved in it at different times and places. This fluctuation in the relative strength of value is shown by the fluctuation of prices, and can be illustrated by a consideration of ordinary chemical solutions of different strength, as, for instance, salt and water.

Let us take a certain known quantity of some particular perfect solvent, something that will readily take some particular other thing into solution, and take an accurately ascertained quantity of this other thing or soluble thing (which we will hereafter call the soluble) and put it into our measured solvent, dissolving them thoroughly. The result or solution will be homogeneous, that is, samples taken from the top will be exactly

as strong as those from the bottom or anywhere else, and, therefore, equal quantities of the solution contain equal quantities of the soluble. Now let us take this as our standard solution or solution of standard strength by which to compare the strength of other solutions. Now we have various other solvents, in each of which some of this particular soluble is dissolved, and we assume that we are provided with an instrument by the use of which we may unerringly ascertain the relative strength of each solution as compared to the strength of the standard solution.

Let us call this standard strength, or the strength of this standard solution, *one*, or unity, and other solutions are 1-8, 1-10, 1-4, etc., as strong as the particular case may happen to be.

Let us divide this 1, or the relative strength of this standard solution, into 100 parts or hundredths, then the relative strength of the standard solution is 100-100, and the relative strength of the solution that is 1-8 as strong would be expressed by 12 1-2 hundredths or it is a 12 1-2 per cent solution, and the relative strength of a solution that is 1-4 as strong, would be 25-100 or it is a 25 per cent solution.

Now let us call this standard solution A, and at random take six other solutions, successively marking them B, C, D, E, F, and G, and after trial we find them respectively to be 1-8, 1-10, 1-4, 3-20, 1-5, and 2-5 as strong as the standard solution, or they are 12 1-2, 10, 25, 15, 20, and 40 per cent solutions. Now suppose that by perpendicular lines we represent this comparative strength as it exists in each particular case, the height above the common zero level of the line repre-

senting the standard solution being 100, and the heights being to heights as strengths are to strengths. If this be done it will result in a diagram, which we have marked No. 0, representing with perfect accuracy the relative strength of these solutions.

We have divided the length of the standard line into 100 parts and the lengths of the other lines representing various relative strengths, naturally take their proper height from the base or zero level, which is the level of no strength, no soluble in the solvent, no solution.

This Diagram 0 represents a general case, from which, by certain variations, other cases are originated and back to which they are referred. It is a point of beginning a zero case or initial case and is therefore marked case 0, and is a type from which all the others are derived.

CASE I.

WHERE THE STRENGTH OF ONE SOLUTION IS DOUBLED, THE STANDARD AND ALL OTHERS REMAINING AS BEFORE.

Suppose we take the solution D, and double its strength, that is, put as much more of the soluble into the solvent as there was before; now Diagram 0 no longer represents the relative strength of the solutions but it is now represented by diagram 1, where the line D is twice as long as it was before, the other lines remaining unchanged as among themselves, but as compared with D they are all 1-2 as long as they were before.

CASE II.

WHERE THE STRENGTH OF EVERY SOLUTION BUT THE STANDARD IS DOUBLED, THE STANDARD REMAINING OF THE SAME STRENGTH AS BEFORE.

Now, operating upon an example of the typical case

0 illustrated by Diagram 0 (which we will hereafter refer to as the "initial case"), suppose we double the strength of every solution except the standard; the result is then represented with perfect faith by Diagram 2, which speaks for itself.

CASE III.

WHERE THE STRENGTH OF THE STANDARD SOLUTION ONLY IS DOUBLED.

Take an example of the initial case, Diagram 0, and double the strength of the standard only, the others not being interfered with, the relation will then be truly represented by Diagram 3.

CASE IV.

WHERE THE STRENGTH OF THE STANDARD AND THE STRENGTH OF EVERY OTHER SOLUTION BUT ONE IS DOUBLED.

Take samples of the solutions of the initial case, and, making an exception of D, with which we do not interfere, double the strength of all the other solutions, including the standard. This state of relativity is faithfully represented by Diagram 4, where D is the solution, whose strength has not been changed, but whose relative strength is one-half of what it was before.

CASE V.

WHERE THE STRENGTH OF EVERY SOLUTION, STANDARD INCLUDED, IS DOUBLED.

Take samples of the solutions of the initial case and double the quantity of soluble in each solution; this state of relativity is represented by Diagram 5, a counterpart of Diagram 0; nevertheless, it is a true statement of the relative strength of these solutions, al-

though in an equal quantity of any particular solvent there is twice as much soluble as there was before.

CASE VI.

WHERE ONE SOLUTION IS MADE WEAKER, THE STANDARD AND OTHERS REMAINING OF THE SAME STRENGTH.

We will suppose that we can abstract the soluble from the solvent as easily as we can add it to it.

Taking a sample of the initial case, suppose we abstract exactly one-half of the soluble from the solution D, the resulting interrelationship of strength will be exactly represented by Diagram 6.

CASE VII.

WHERE ALL OF THE SOLUTIONS EXCEPT THE STANDARD ARE MADE TWICE AS WEAK OR ONE-HALF AS STRONG.

If we take a sample of the initial case and abstract one-half of the soluble from every solution except the standard solution, then the resulting relationship of the strength of the solutions will be faithfully represented by Diagram 7.

CASE VIII.

WHERE THE STANDARD SOLUTION IS MADE WEAKER AND THE OTHERS REMAIN OF THE SAME STRENGTH AS BEFORE.

If, taking a sample of the initial case Diagram 0, we extract or abstract 1-2 of its strength from the standard solution, the resulting relative strength of the solutions will be faithfully represented by Diagram 8.

CASE IX.

WHERE THE STRENGTH OF THE STANDARD SOLUTION AND THE STRENGTH OF ALL THE OTHER SOLUTIONS BUT ONE, IS WEAKENED.

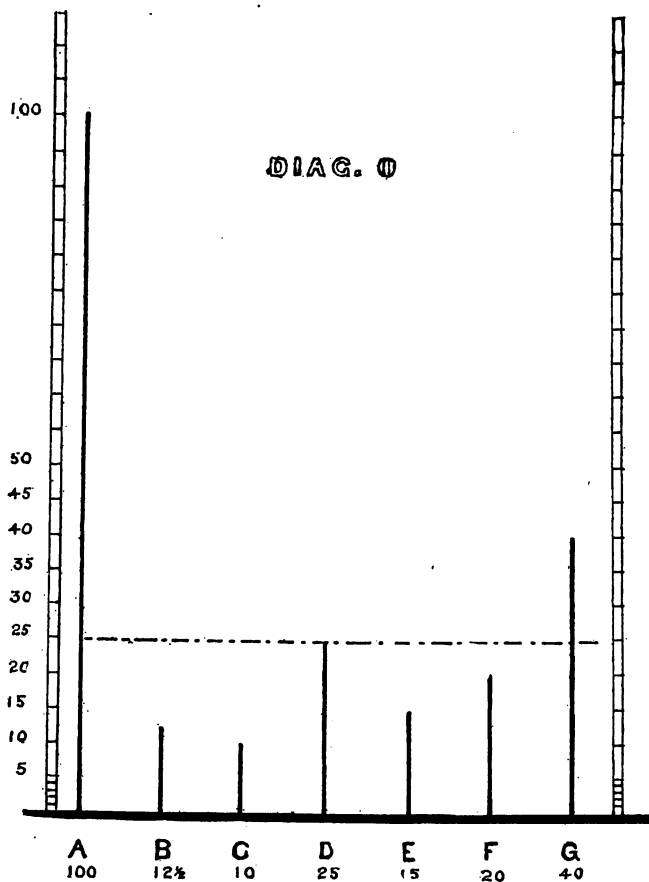
Take samples of the solutions of the general case of

Diagram 0 and, *excepting D*, take out exactly one-half of the strength of the solutions (or, excepting D, abstract one-half of the soluble from each of the solutions), and we have the relative state of the strength of the different solutions truly represented by Diagram 9.

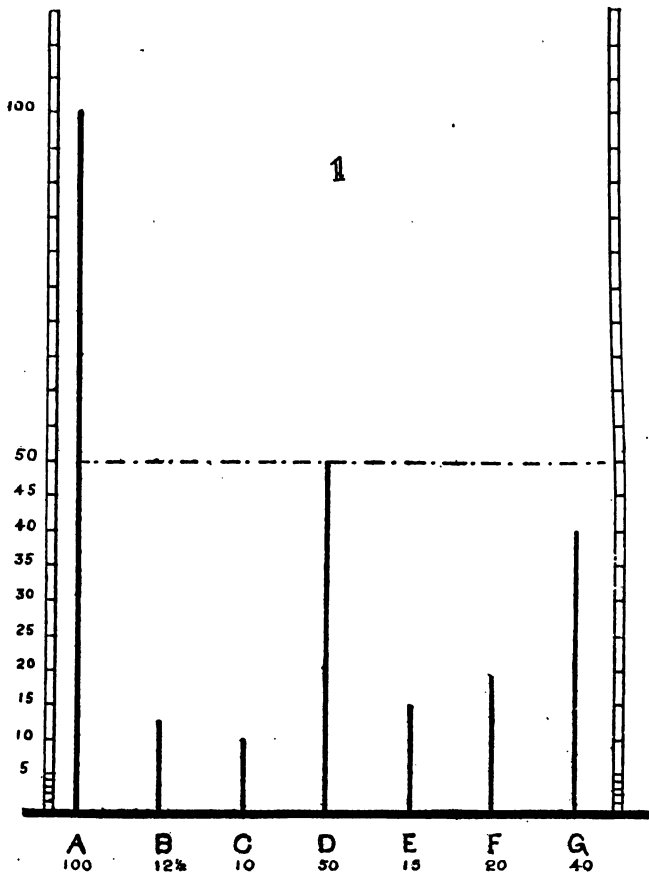
CASE X.

WHERE THE STRENGTH OF ALL THE SOLUTIONS, STANDARD INCLUDED, IS WEAKENED.

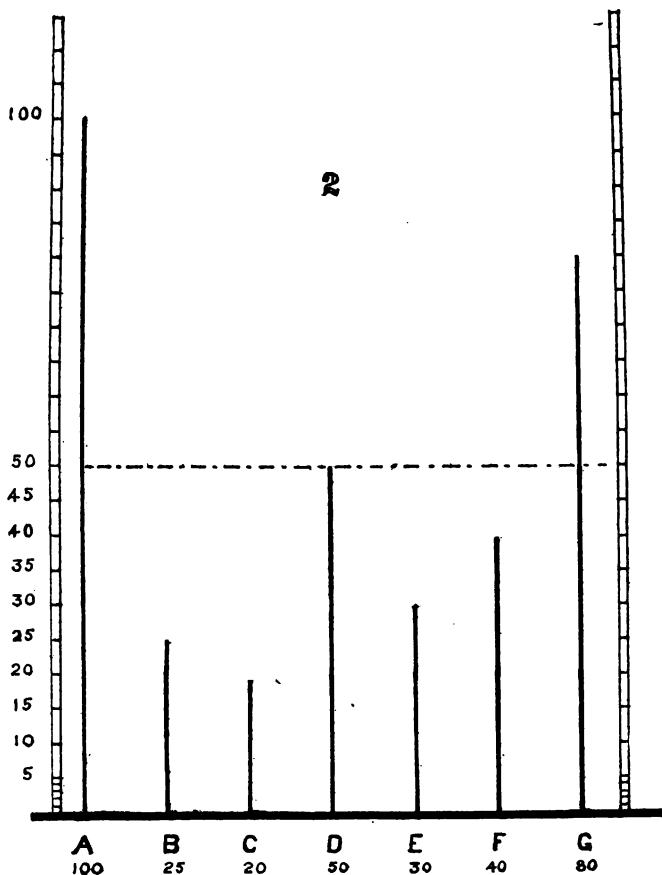
Take samples of the solutions of the initial case of Diagram 0, and abstract 1-2 of the soluble from each of them; the resulting relationship of their various strength will be exactly shown by Diagram 10.



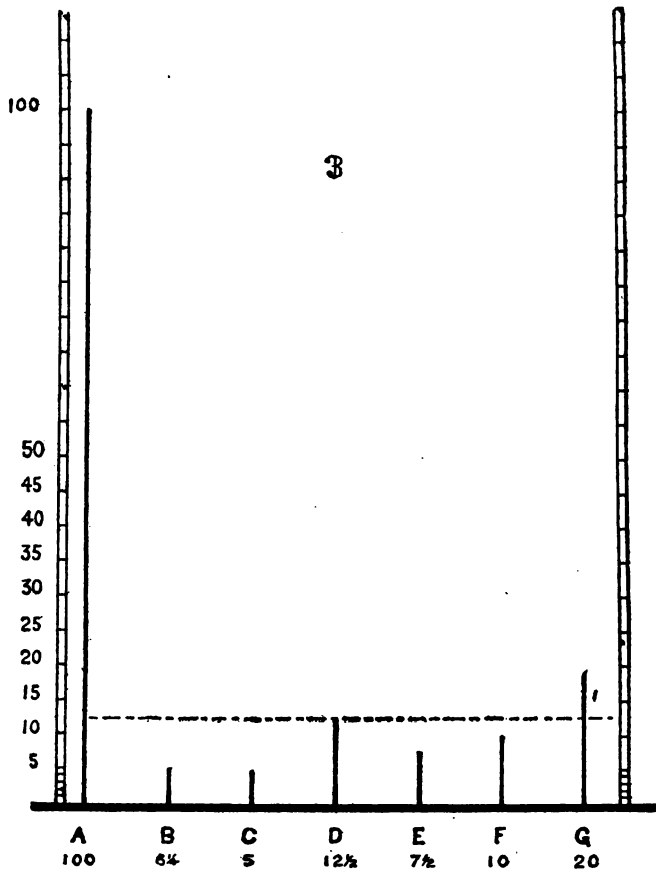
This diagram illustrates the relative strength of each one of this set of solutions as compared to the strength of the standard solution, A; or, as applied to commerce, represents the price or relative value or relative purchasing power of each one of this set of commodities as compared to the purchasing power of the standard commodity A (money). By subjecting this set of solutions or commodities to certain changes, the succeeding illustrative diagrams are derived.



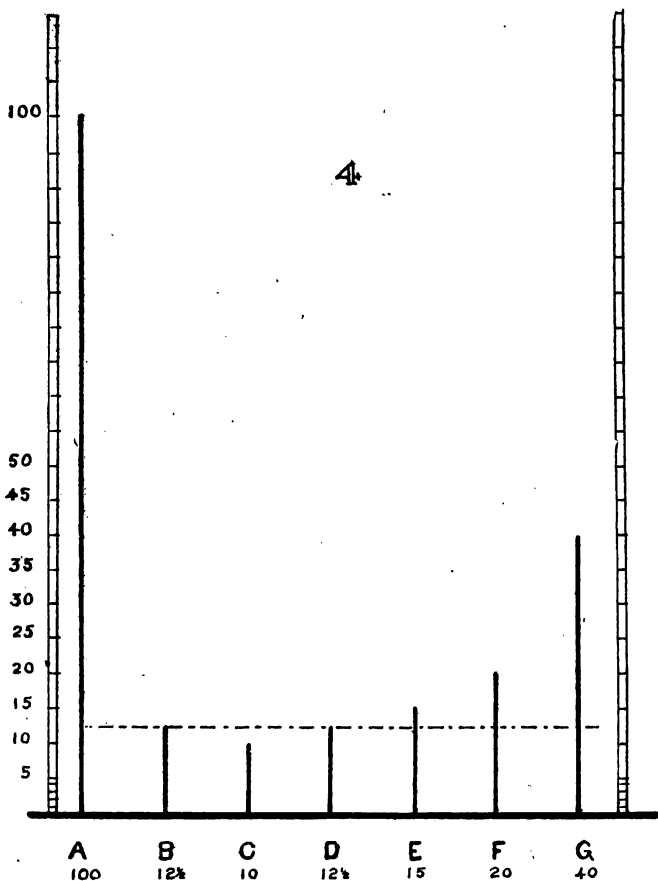
Here the strength (or purchasing power) of D *only* has been doubled; the strength of none of the others has been changed.



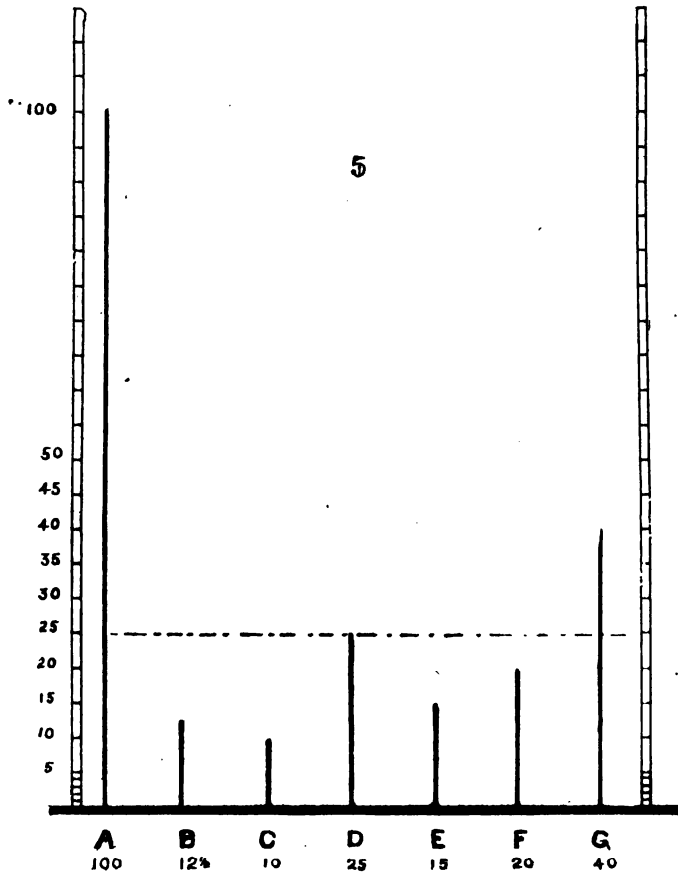
Here the strength of every solution but the standard has been doubled. The standard, A, remains of the same strength, as in Diagram o.



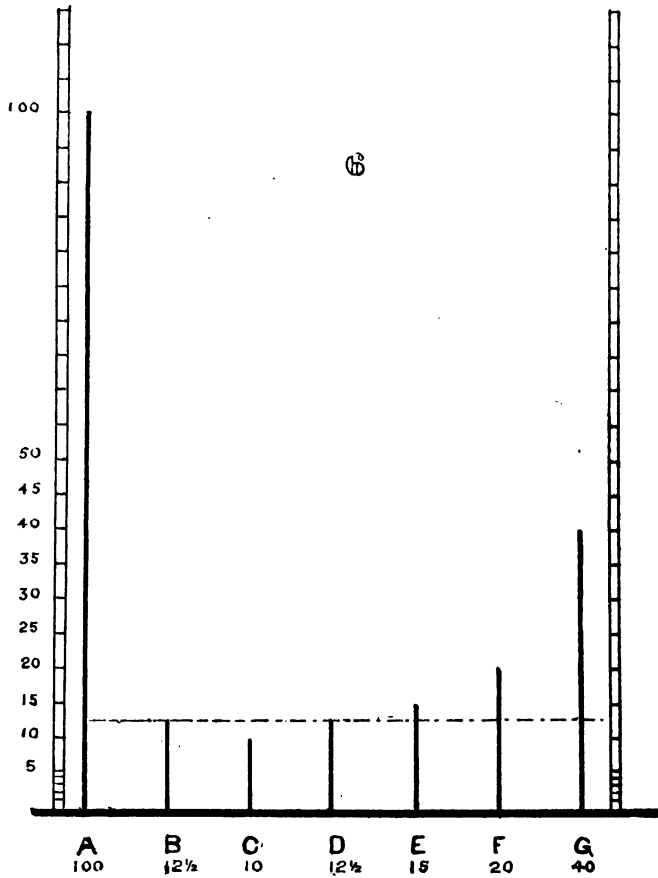
Here the strength of the standard *only* has been doubled. (This shows B at "16 to 1.")



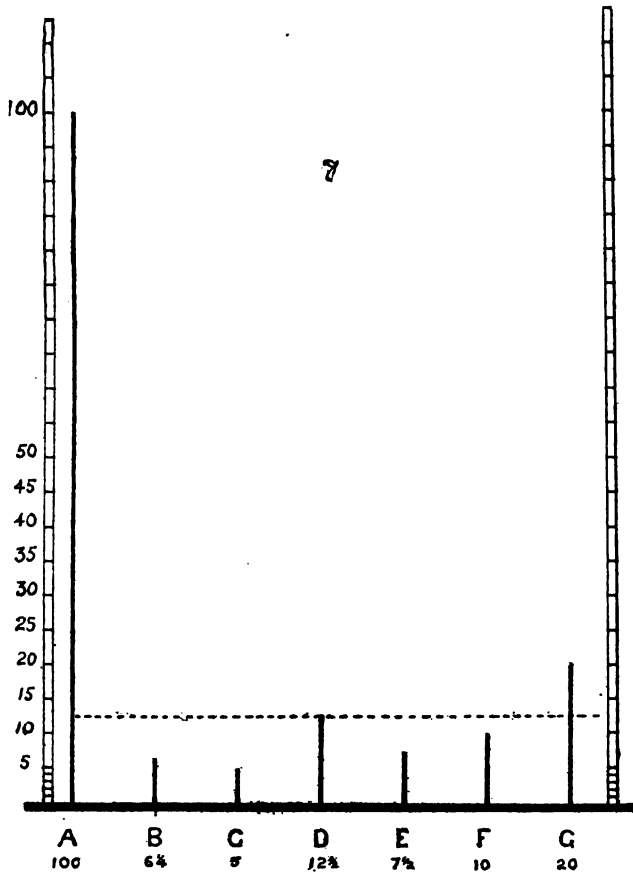
Here the strength of every one but D has been doubled, D remaining of the same strength as in Diagram o (but not of the same *relative* strength as in Diagram o).



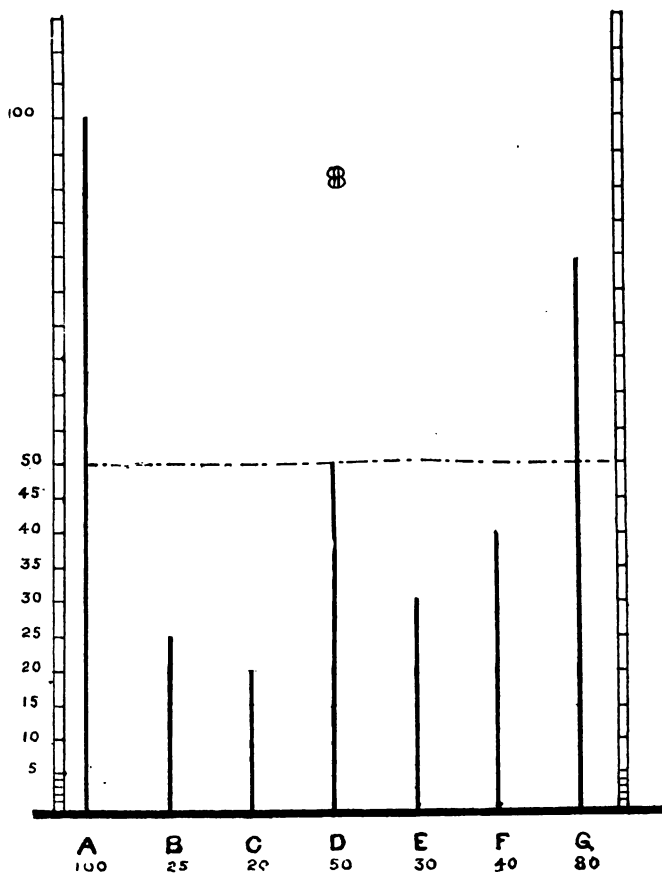
Here the strength of every one has been doubled. (They are each twice as strong as before, though their relative strength is unchanged.)



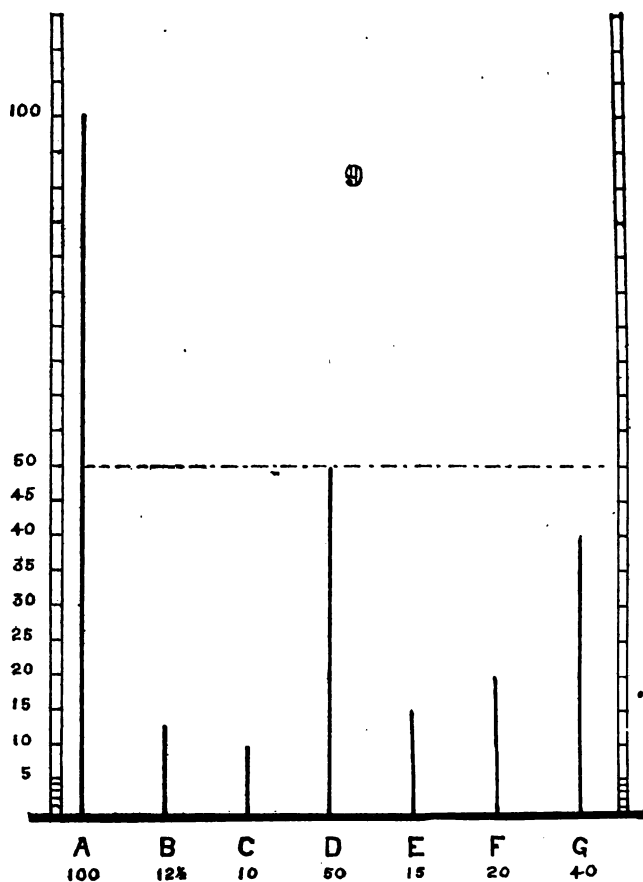
Here the strength of D has been reduced one-half, while the strength of none of the others has been changed.



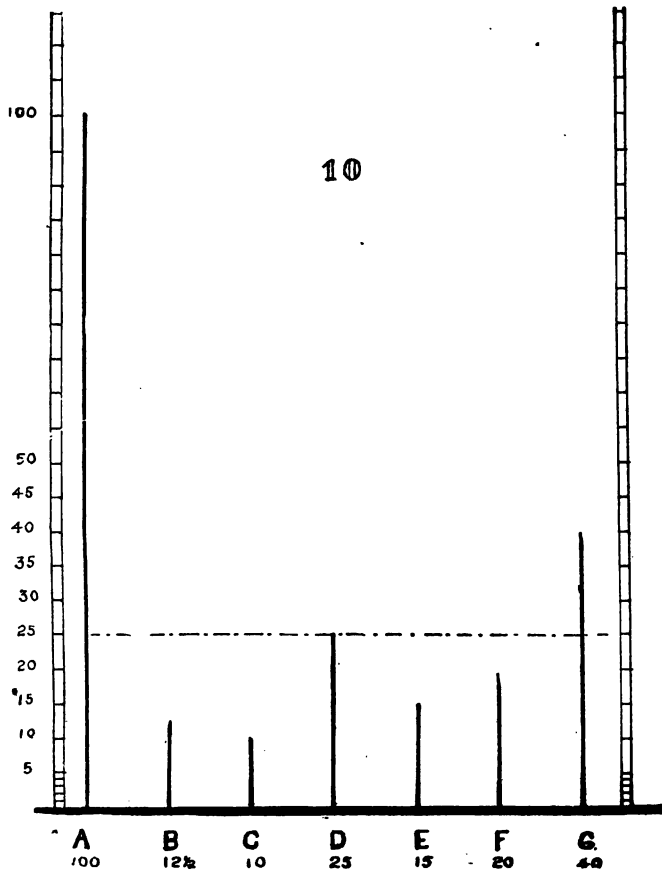
Here the strength of every one but the standard, A, has been reduced one-half. (This shows B at "16 to 1.")



Here the strength of A only has been reduced one-half.



Here the strength of every one but D has been reduced one-half, D remaining of the same strength as before (but not of the same relative strength).



Here the strength of every one has been reduced one-half. They are each one-half as strong as before, though their relative strength (or price or relative value) is unchanged.

CHAPTER III

Theory of Value (Continued).

Let us carefully begin again and take some particular material (appropriate commodity) in which our particular soluble (value) is dissolved. The solution is homogeneous, that is, weight for weight it is of equal value, or is all alike; for homogeneity of material means homogeneity of value. Now let us take this particular solvent as our *standard solvent*, and as we find it with our particular soluble *value* already dissolved in it, we will adopt this particular solution (commodity) as our *standard solution*; and, to distinguish it from all other substances containing value in solution, otherwise known as commodities, we will call it *money*. It is the value of money that is standard, and its price is always one, or unity; it matters not how the value it contains be increased or diminished, mathematically its price does not vary, for it is always unity, being standard, but this increase or diminution of the quantity of value in the standard may be shown in the fluctuation of the prices of other commodities.

Now we have various other different solvents (materials), in each of which this particular soluble (value) is dissolved to form various solutions (commodities), and we have an instrument (markets) which unerringly reports the relative strength (gives the price) of all of

these solutions as compared to the strength (price, or relative value) of the standard solution (money).

It tells the proportion of value to weight in commodity as compared with the proportion of value to weight in money, or, in other words, tells the relative purchasing power of each commodity as compared to the purchasing power of money. (As we have shown before, this is exactly what prices do.)

Now suppose that we divide this one, or unity (which is the strength of the standard), into 100 parts or hundredths, its strength will be represented by 100 hundredths, and suppose we mark this standard solution A, and, for example, take six other solutions (commodities) at random and successively mark them B, C, D, E, F, and G, and successively find them to be 1-8, 1-10, 1-4, 3-20, 1-5, and 2-5 as strong (valuable) as the standard (money), or, respectively they are $12\frac{1}{2}$, 10, 25, 15, 20, and 40 per cent solutions (commodities). Now suppose that by perpendicular lines standing upon a level of zero height we represent this comparative strength as it exists in each particular commodity. The height of the line representing the strength or purchasing power of money being 100, the height of each other line bears the same proportion to that height as the strength or relative value of each commodity bears to the relative value of money.

When we have done this we will have Diagram 0 representing with perfect accuracy the relative value existing among all these commodities, money included. They all have taken their proportionate heights from the base or zero level, which is the level of no value, no strength, no height, substance worth 0.

A substance possessing no value is not a commodity, its value (for it has none), being absolute 0, can not be used as a standard of relative value, and could not be a money any more than could anything possessing no weight be used as a standard of specific gravity or relative weight.

If we had a Joshua empowered to make time stand still, the scale of prices indicated in Diagram 0 might represent the state of the market forever, but as things are, with the progress of man and the surge of advance, the tendency to discovery, invention, and improvement, we can not freeze affairs into any such rigidity, although this would be the elysium of economic felicity as taught generally by the scholastics of the art of gold money advocacy.

Let us suppose various changes to take place in the quantity of value existing in the commodities of Diagram 0, and let us represent by diagram the result in each case. Each case below will be a direct derivative of the general case illustrated in Diagram 0, which is a chart of relative value, and, in fact, corresponds or is analogous to any market report, and is a true scale of prices. In each particular case we will operate upon the commodities of Diagram 0, and refer each change as it occurs to Diagram 0, which represents a general case or primal case or initial state: and we will call it the initial case.

CASE I.

WHERE THE VALUE IN ONE COMMODITY IS INCREASED, WHILE MONEY (THE STANDARD) AND THE REST REMAIN AS BEFORE.

Let us suppose the quantity of value in commodity

(solution) D to double, while the value in the other commodities remains unchanged.

The resulting state of affairs is represented in Diagram 1, where the line D is twice as high as it was before, the others remaining unchanged. All the others among themselves are exactly what they were before, but, as compared to D, they are only $\frac{1}{2}$ as high as they were before, while D is twice as high as it was before. This shows an important truth, viz., that no single price (relative value) can rise unless the value of money falls in the same ratio, nor fall unless the value of money rises in the same ratio, which proves that gold money is no more stable than any commodity with which it may be compared. The value contained in money may change, but its price is constant and never changes; it is always worth the same per dollar or per pound.

CASE II.

WHERE THE VALUE (COMMAND OVER LABOR) IN ALL THE COMMODITIES BUT THE STANDARD (MONEY) IS INCREASED.

Take the commodities of the initial case, and, excepting the standard (money), put as much more value (command over the services of mankind) into each of them as they had before, then Diagram 2 faithfully represents the interexisting relation of value. Any one of these except the standard is just twice as hard to get as it was before, or buys twice as much labor per pound or per any unit weight.

CASE III.

WHERE THE VALUE IN THE MONEY ONLY IS INCREASED.

Suppose that in the initial case you should double the

value in the money only. The result is represented in Diagram 3, in which the height of the standard is exactly what it was before (as it always is, for it can not differ as measured in or by itself); nevertheless, the height of the standard as compared to each of the other lines is just twice what it was before. It is a faithful market report or price list, and a true picture of the relative value (or price) of all these commodities.

CASE IV.

WHERE, EXCEPTING ONE COMMODITY, YOU INCREASE THE VALUE IN THE STANDARD AND THE REST.

Take the commodities of Diagram 0, and, *excepting commodity D*, double the value in every one of them, and you will have in Diagram 4 a faithful representation of the relationship of the force of value or purchasing power as it now resides in these commodities.

It is a faithful market report or scale of prices.

CASE V.

WHERE THE VALUE IN EVERY COMMODITY, MONEY INCLUDED, IS INCREASED.

Taking the primal case of Diagram 0, let us add as much value to each commodity as it contained before, that is, double the value in each of them, money included. This relative state of value is faithfully represented in Diagram 5. It is the same in appearance as Diagram 0, and the prices are exactly the same. It is a popular fallacy that these two sets of prices must represent the same state of affairs, the same public prosperity, the same sort of "times," but they do not. Diagram 5 is a case of "harder times" than Diagram 0, but prices are exactly the same and are faithfully reported; so, con-

trary to much public opinion, with the same prices there may be "good," "moderate," or "hard" times. We shall try to explain this later. The "best times" is the ability to get things for the least work.

CASE VI.

WHERE ONE COMMODITY ONLY IS MADE WEAKER, OR TO
CONTAIN LESS VALUE THAN IT DID BEFORE, OR BUY
LESS LABOR PER UNIT WEIGHT THAN
IT DID BEFORE.

Acting upon the initial set of prices represented by Diagram 0, take the commodity D only and abstract one-half of its (soluble) value. This state of the relation of the values is faithfully represented by Diagram 6.

CASE VII.

WHERE EVERY COMMODITY BUT MONEY IS WEAKENED, OR
HAS ITS VALUE DECREASED.

Leaving the value in money intact, take one-half the value out of the other commodities of case 0, represented by Diagram 0. (It costs one-half the labor to acquire them per unit weight that it did before; they buy half as much labor per unit weight as they did before.) The resulting relationship of value is faithfully depicted in Diagram 7, where money is relatively twice as strong as it was before, but is really of the same strength as measured in heart-beats or vital power or labor.

CASE VIII.

CASE WHERE THE VALUE PERMEATING MONEY IS DIMINISHED,
OR MONEY BUYS LESS LABOR PER MONEY UNIT, OTHER
COMMODITIES REMAINING UNCHANGED.

Take the zero case of Diagram 0 and abstract from money one-half of its value, and Diagram 8 will faith-

fully represent the resulting relative strength of value among the commodities.

CASE IX.

WHERE THE VALUE IN THE STANDARD AND IN ALL OTHER COMMODITIES EXCEPTING ONE IS DECREASED.

Take the initial case represented in Diagram 0, and, supposing that we except D from any change in its value (control of human effort), and we take away from each one of the others one-half of its value, we have the relative state of the market faithfully depicted in Diagram 9.

CASE X.

WHERE THE VALUE (COST IN LABOR TO THE LABORING WORLD) OF ALL COMMODITIES, STANDARD INCLUDED, IS DECREASED.

Taking the commodities of Diagram 0, suppose we take one-half of its value out of each and every commodity, money of course included.

We will then have the resulting interexistent relative value faithfully reported in Diagram 10—a diagram exactly the same as Diagram 0, but representing an entirely different state of mundane affairs; for here, as regarding these commodities, the purchasing power of the laboring man has been exactly doubled and is exactly four times as great as in Diagram 5, and he is indefinitely or infinitely happier; for we know of no mathematically exact measure for pleasure.

In fact, it is a rule of Valics, or the Science of Value, that the purchasing power of laboring man (industry) as regards any commodity weakens directly as its value increases.

This purchasing power of laboring man is utility to humanity; and it is no good argument to say that laboring men are "well enough off" because they may be "better off" than they were at some past time. Political Economy has no standard but justice, right, truth, perfection, and will advance as long as she can discover error, and mankind will advance as it abandons the practise of error, or quits living under false theory.

CHAPTER IV.

Theory of Value (Concluded).

EXPLANATION OF DIAGRAMS.

CASE I.

As compared with Case 0, is a case where you make one commodity stronger in value, or contain more value, or buy more labor, than it did before, or make it harder for labor to obtain than it was before. This does not benefit the community, and is a direct injury to those who use the commodity; this happens through any monopoly whereby its price is raised or the difficulty of its acquisition by labor is increased. This may be caused by a special tariff, a trust, or a special privilege of some sort.

CASE II.

Illustrated by Diagram 2, represents a case like the above, only it includes more, and, consequently, its effects are worse, as it is a case of a general increase in the prices of commodities, except, of course, money, whose price never changes. Money is just as hard to get as it was before, but all other things, the necessities and luxuries of life, are harder to get. "Living is high." Provisions are "dear," as they cost much vital power, perhaps of the best beloved. It means less general happiness, and advancing "hard

times." Public indebtedness is harder to pay. The workingman is told that he is too extravagant; that he must practise more economy, and work harder; must quit aping his "superiors," and leave extravagance to his "betters." This state of affairs would result from a sweeping general increase in the difficulty of acquisition of all commodities excepting money, and, for instance, may be partly, at least, brought about by a sweeping general high tariff or by a state of partial siege.

CASE III.

The third case is where the standard, or money, is made stronger, that is, contains more value, is harder on the average for labor to obtain, or buys more labor, while other commodities remain as before, or buy the same labor, per unit weight, that they did before.

If we make money just twice as hard to earn, or have twice the value it did before, while other commodities remain as they were, it would then buy just twice the commodities per pound or per dollar. The hardship comes on in the matter of debts or contracts for the delivery of gold material. The imposts or taxes, (whether they be collected directly for the government or whether they be interest paid to individuals) for this purpose may be the same in quantity, but they cost twice the labor to obtain, and will buy twice the commodities and twice the labor of men that they did before. It benefits the bondholding and annuitant class at the expense of labor. The large herd fed by enforced charity wax fatter; the innocent (Labor) who blindly feeds them suffers, while progress, or the coming of the glory of the human race, is retarded.

Prices are apparently lower, in this case one-half of what they were before. Each article or commodity, excepting money, costs the same labor per pound that it did before, while money costs twice the labor per pound or per dollar that it did before; so the same amount of labor gets half the money it did before. It is (especially in a condition of high monetary indebtedness) a state of high tension or hard times. Under gold monometallism, the value of gold, from interest and increasing obligations, is enhanced, while other trusts do what they can to increase the value of other commodities. Political economists, especially the gold standardists of college chairs, in order to calm the diffident questions of inquiring industry, usually reason thus: they say that if money be twice as hard to get, and other commodities just as hard to get as they were before, then for the same money you buy twice as much of other things, or, in other words, for the same labor you buy exactly the same commodities you did before; and, therefore, the laboring world, or labor, is just exactly as well off as it was before. This is untrue, for labor pays all debts, national, state, municipal, corporate, and private; and this must be taken out of the excess beyond the necessity to support life; and this gold is twice as hard to get, and buys twice as much for the fellow that gets it.

CASE IV.

Here, with the exception of D Diagram 4, all commodities, including money, contain more value, or are

harder for labor to get, than they were in the initial case.

None of these denote advance; on the contrary, they all denote retrogression, except D, which is just as hard to earn as it was before, but as far as prices are concerned, they are just what they were before, excepting D, which is cheaper and apparently, though not really, easier to get than it was before, as its price is one-half of what it was before.

As compared with the initial case of Diagram 0, it is a case of harder times; tighter, scarcer money; cheaper men.

CASE V.

Where the value (cost in labor) of money and of all the commodities is uniformly increased. Money is harder to get, every other commodity harder to get. If we double the value in every case, money costs twice the labor to get that it did before; so does every other commodity; but prices are the same. It is ruinous to the industrious world, and a case of benefit to the bondholders and increase of burden to bondsmen. If continued, it is the prelude to dark ages, stagnation, decay, mundane gloom, general "hard times" and unrequited effort on the one hand, and extravagance and profligacy on the other. Ennobling influences lessen, men become cheap, women cheaper, money dear, the struggle for existence becomes cruel, and in the survival of the fittest, the sneaking, faithless, time-serving, cunning, cruel, greedy, and treacherous element increases, and the tendency is for Frankness, Honesty, Honor, Liberty, Kindness, and Humanity to die out. Still this

is the state of affairs advocated as being the best by almost every government in power in the world.

Many men, probably well-wishers of their country, but misguided, extol what they call the "stability" brought about by the gold standard. It is but the stability of the grip which Profligacy has upon the throat of Industry, or which Worthlessness has upon the end of the halter around "the neck of the future."

A few men roll in affluence; the generality become slowly debased, cruel, degraded; for poverty or distress is in fact a fruitful source of crime. It means decrease in the purchasing power of the laboring world, or "hard times," and, with a high state of general indebtedness, combined with the quality of the accelerated increase thereof, Labor is placed in pawn or peonage for the payment of this, being the only thing that can really be taxed, being, after all, the "money of ultimate redemption," the property of ultimate taxation.

This high tension, or hard times, caused by individual monopolization, is the reason for the "downfall of nations" (for if a nation pursues the right policy it can never really fall), and is usually shown by great popular unrest and discontent (being a sign of the vitality of the spirit of the people), with war, revolution, and social upheaval, the downfall of some real or imagined oppression, and the building anew, amid destruction wrought by violence and inhumanity; if not, the people sink tamely, and become, on the one hand, masters without true nobility, and, on the other hand, quiescent slaves, indifferent to, or ignorant of, their own degradation, ignoble and venial, without true patriotism, ascribing their abasement to the will of Heaven, or to causes

declared to be irremediable, later to be conquered by a people of superior or less servile mould.

This is the influence of the gold monometallism horror and its concomitant abuses, but this tendency is opposed by improvements in manufacture and progress in methods and means in many directions.

CASE VI.

Is a case where you make one commodity weaker or decrease its value or command over the services of men.

It benefits all who use the commodity, brings some ease and probably happiness to all who need it, and is decidedly an improvement. This is shown in Diagram 6, which is the same in appearance as Diagram 4, though representing really a very different state of public prosperity. These two diagrams show, as do other diagrams, two ways of changing price.

CASE VII.

Is a case where you make all the commodities but money weaker (contain less value, be easier for the working world to obtain).

This benefits the useful or industrious world, which gets commodities for less money than before, and gets the same money for the same labor it took before, therefore, the good things of life cost less labor than before, and Labor is the gainer, has more time to put in on debt, taxes, education, public welfare, the study of Political Economy, politics, recreation, etc. This is brought about by improved processes, machinery, and methods in every direction.

CASE VIII.

Where you make money weaker (easier to earn), other commodities remaining as before. The same work brings more money and buys the same amount of commodities.

Let money be weakened one-half (cost on the average half as much labor per dollar). Same work gets twice as much money as it did before (wages doubled), prices of other commodities doubled (price of money never changes, it matters not how hard or easy it be to obtain).

Then commodities per pound cost twice what they did before in money, but exactly what they did before in labor. The benefit comes in paying bonds and debts of all kinds, or wherever there is a contract for the delivery of the standard. This would help labor now, for there is a terrific strain or demand upon labor for gold, or upon gold for labor, and labor could then get this tribute easier, for the purpose of handing it over to a legally protected pirate, who holds him as a pawn (peon).

This conqueror and task-master, and the latter-day publicans who minister to him, together with a swarm of obsequious parasites, have the hardihood to aver that gold money is the only "sound" money, and gold monometallism the only "safe" system for the commerce of the world; and this pageant is followed by the deluded hordes of Ignorance marching in train.

Suppose that the standard as above should keep weakening in value (command over labor); we would soon have not only "dollar wheat" but \$10 wheat, but we would also have \$10 labor.

The man who got a dollar a day might have bought a bushel of wheat with it, but now he gets \$10 a day, and can buy only a bushel of wheat with it, and other things in proportion, but he finds that money is "easy." Corporation bonds, old government bonds, etc., rest easier upon him, and he is happier, and has some time in which to study the different methods of taxation, governmental, and specially privileged, vested wrongs, special privileges and public robberies, whereby Industry opened Pandora's box and let all the blessings out but hope—hope of the prosperity that will sweep over the world under the blessings of "sound money," made nine-tenths of gold and one-tenth of copper, and sold by the dollar for 25.8 grains thereof, and to listen to the song of the siren of the gold standardists, who would have Labor believe that the science of government is the practise of public spoliation.

The weakening of the standard (it being gold) brings on eras of prosperity, as it means the cheapening of the commodity, gold, the lightening of debt. It is approximately the state "flush times in California," "a rich mining camp" or discovery of rich gold mines, with heavy influx of gold into the commerce of the world.

This is a case of "rising prices," as was the case of Diagram 2, but it represents a very different and more favorable state of affairs, which is not apparent by any difference in prices as compared with it. In more or less degree these rising prices of prosperity have followed the discovery of large quantities of gold and silver. For instance, the discovery of America, Australia, and California, and more recently South Africa, Alaska, etc., have relieved to some extent the strain, but as matters are now under the gold standard all times

must be "hard," but some "times" may be harder than others.

CASE X.

Where the value (cost in labor) of all commodities, standard included, is weakened. By uniformly weakening them by one-half, we will have the state of price or relative value depicted in Diagram 10; nevertheless, the diagram is the same as Diagram 0 or Diagram 5, but the state of public prosperity in each of these cases is very different.

In Diagram 5 the "tension" is twice what it was in Diagram zero, and in Diagram 10 it is half what it was in Diagram 0. So that Diagram 10 has a "tension" $\frac{1}{2}$ as great as Diagram 5. Nevertheless the diagrams are the same, whereas Diagram 5 represents "times" twice as hard as Diagram 0, and four times as hard as Diagram 10, which represents the easiest "times," the highest state of prosperity among the three. The purchasing power of industrious man is four times as great in case 10 as it was in case 5, and his happiness wonderfully increased. It is the purchasing power of Industry to which the gold standard is inimical.

While the gold standard combined with the great interest-bearing gold debts of the world, in which Law farms Labor out to the power-sucking ghost, together with other monopoly work in one direction, some circumstances other than the exploitation of new territory have been working in favor of mankind, and they are improved methods, processes and machinery of all kinds for transportation as well as manufacture, together with the attention that is publicly given to education, whereby the average intelligence is increased, which

brings about the spread of liberality or humanity, or, rather, the suppression of ignorance, bigotry, and arrogance, and an inquiring and scientific spirit, a desire that truth may prevail, an increased interest is taken in the public welfare, as evidenced in the increased study of Political Economy or of public questions, which are all influences against the demoralization and ruin that must under present conditions inevitably attend a final continuance in the error of what is known as gold monometallism. But long before this error shall have accomplished the ruin of mankind, its temple of sophistry will fall to the ground, be blown to nothingness, the fallacies of its defenders exposed, and the iniquity as well as idiocy of its political championship revealed.

An inspection of the reasoning and the diagrams shows that, contrary to a very widespread impression, prices furnish no absolutely true indication of the general prosperity or of the "times," for with the same prices we may have "hard" or "easy" times, "bad" or "good" times. Prices do not show the relative general ease or difficulty of living.

Prices or relative values in this, again have their analogy or points of similarity or symmetry with specific gravity, for if you should double the gravity of every substance in the world, that is, make each one uniformly twice as heavy as it was before, the result would not be shown by any steelyards or in any scale pans in the world.

People might be very much oppressed by their extra gravity (might feel "heavy") but it would not show by steelyards or any beam balances (though it might with spring balances, for they are affected in a different way, as is the vital power which opposes gravity).

The very standard itself would be doubled, and an object which weighed 10 pounds before the general doubling, would still continue to weigh 10 pounds, just as in a general uniform increase of value, as in Diagram 5, any object worth \$10 before would be worth \$10 after. If the specific gravity of anything should be 2 before, it would be 2 after; for, the standard and everything else having doubled, there is no change in the relationship.

In Diagram "O" if we should consider A to represent the specific gravity of a standard, then B, C, D, E, F, and G would represent the specific gravities of the other substances, being respectively specific gravities of 1-8, 1-10, 1-4, 15-100, 1-5, and 2-5, and in the case of specific gravity we can hardly imagine that this relation would change; so the table would stand forever as indicating the specific gravity or relative weight of these substances.

If we should imagine any change, we would imagine it to be uniform, or that everything would be in equal ratio, so that the table would still stand as a diagram of the specific or relative gravity of these substances. For example, it would not be easy or natural for us to imagine that the specific gravity of lead would be doubled, while that of copper were reduced or increased in a different ratio. But an analogous thing is exactly what occurs in prices, and we may have silver "rising" and wheat "falling" or wheat "rising" and silver "falling."

We have in prices a "variable" standard, a standard that varies or is stronger or weaker at different times, for the very quantity of value (although mathematically always one or unity) contained in our standard is uncertain and indefinite and subject to the same fluctua-

tions and uncertainties as is the value in the commodities which are compared to its value; for money and all other commodities in trade are subject to the same influences and similarly affected by like conditions.

In the case of chemical solutions, strengths are absolute; we may weigh the soluble in the standard and in all the others. Suppose, for instance, that the soluble were common salt dissolved in water; we can evaporate and condense the water and weigh or measure the salt, and we would have for each solution the proper and unvarying quantity of salt. It is something tangible, visible, and ponderable.

Although in the case of gravity we may sense the gravity, or perceive it by the sense of weight, we can neither see it nor touch it, so that in both gravity and value our standard is intangible and invisible, and in the case of value in the United States it is always the value of 25.8 grains of minted gold. In the case of weight in the United States and England, it is the weight of a piece of brass deposited in the Tower of London, to which all other pound weights are referred. For the metric system, it is the weight of a certain cube *a*, cc, or cubic centimeter (cc=cubic centimeter) of water, and is called a gramme. A thousand cubic centimeters of water is a litre of water, and weighs a kilogram, called a kilo. So that the weight of a litre of any substance quickly shows its specific gravity as compared with water. Its weight in kilograms is its specific gravity, which is a scientific convenience, a common-sense arrangement. So it is that in this regard Frenchmen are generally better educated than Englishmen or Americans, and have a better idea of weight and the specific gravity of substances.

If we weighed our money by the pound avoirdupois, and decimal or convenient subdivisions thereof, we would have a better idea of relative value or of how much the commodity money is costing in labor, as compared to the other substances, and how much labor it is costing to keep this elegant, exquisite, economical, intricate, impartial, international, imperial, interesting, immaculate, invisible, ideal, inspired, impudent, infernal gold money interest machinery going.

When the specific gravity of any substance is once established, it is established forever and becomes a part of scientific data or knowledge, recorded in tables of specific gravity. But value differs from gravity in the fact that it is subject to continual fluctuation in every direction, and the only one thing certain is that the nearer zero or the mark of no cost in human labor any article can be brought, the better, as this is progress, civilization, greater return or satisfaction for labor, or increase in human happiness, greater economy of the human strength. So Political Economy is interested in reducing value or increasing the return for labor. Another most important thing to consider in this discussion is time, for if we take the case of chemical solution as illustrated in Diagram o, we find that it is or may easily be made inalterable with time. We can make another set in every possible respect exactly like it, or as many copies as we like, and under appropriate and easily arranged conditions, we can keep them or reproduce them practically forever. So it is with weight and specific gravity (although we can imagine such a change as possible with the Creator of the universe), no changes have occurred and none are likely to

occur, for we are to suppose the universe to endure as it is now, and a table of specific gravity once made, is made for all time.

It is different, however, in the matter of relative value or prices. The scale of prices of Diagram o might never exactly occur again, and even if it did, it might, as we have before explained, represent a truly different state of affairs for mankind. So we have only one set of prices at a time, but for different times we have one for each, but they may never be exactly the same.

We can not in the same market have different contemporaneous sets, and we can not, as in the chemical solutions, confront one set with another, or with any number of others, for all we can have in a market report is a record of sales or past prices, which are the only true prices, for we are not dealing with what men ask for commodities, but with what commodities *actually* exchange for.

It is this peculiar variability of value that has hitherto baffled every attempt at the exact definition of money, or a correct understanding and clear explanation of the phenomena of price or relative value.

It might be possible in a manner to illustrate what we have called "tension" (times) graphically.

In which case all the lines in Diagram 5 would be twice as high as in Diagram o and four times as high as in Diagram 10. Their *relative* height has not changed, and the distinction is not shown by prices. This could be or would only be done to assist the mind in its imagination. Diagram 10 shows "times" four times as good as Diagram 5. The whole scale is pitched to a different key. The standard would show

the key-note, and if this tension should represent public distress or lack of happiness, then Diagram o is an octave higher than 10, and 10 might be a contented hum and 5 a painful cry, but we have no general key-note, and know no unit measure for either distress or pleasure, and prices, as we have shown, do not certainly show relative general prosperity or public welfare, though it is clear that "low" values or "low" tensions of value indicate "easy" or "good" times. This "tension" may be called strain on Industry or Labor. As a matter of truth, all times have been "hard," and it is the province of Political Economy to show how they may be made easy, so that the times of "refreshing" or general prosperity may come, and every man may be rewarded according as his work shall be. In the case of solutions of salt, etc., we can weigh our key-note. It is something tangible and visible. In the case of gravity it is invisible, intangible, but is physically sensible, for it is weight, a power which acts on our bodies and is counteracted by the vital force, and it is consistently invariable; that is, at the same place any substance always weighs the same.

But value, whatever impression it may make on the mind, makes none on the body, and can not be gauged by any apparatus but the markets, and it is variable, as we have shown, but it is accountably variable, or it varies according to true law and not in an unaccountable manner. Value fluctuates in every object in trade. Prices may fluctuate, and, as a matter of fact, do fluctuate in every object of trade except one; that one is money, or the standard, and although value may fluctuate in the money, the price of money can not and does not fluc-

tuate or change. Money can not fluctuate in price, but it may change in value, that is, become harder or easier to obtain, as do other commodities, and price shows only this *relative* difficulty of acquisition, money being taken as the standard or as the unity, and all commodities compared to it; for all commodities when compared to a single one are thereby compared to each other, whereby money is sometimes called the "common denominator of exchange." We have different moneys in the world, and the money of Mexico (silver) fluctuates as compared to the money of the United States, and *vice versa*. So that the man in the United States pays different prices at different times for Mexican dollars, and therefore the man in Mexico pays different prices at different times for United States gold. The gold moneys of France and Germany in the United States are dealt with as bullion, although of exactly the same composition as American gold, and weight for weight they should exchange for exactly the same, but they are not coined according to our American or dollar system. As a matter of fact, they practically do exchange for the same, for any variance is restrained by the fact that they can be melted and minted into United States dollars without any charge for coinage.

If you should buy an article D as in Diagram 0 and sell it as in Diagram 1, you will have doubled your money; for it has twice the relative value in the second place that it has in the first and will buy twice the money it did before. If you should buy D as in case 3 and sell it as in case 1, you will quadruple your money, for then it would buy four times as much money as before. This illustrates profits in speculation or in business—it shows

how fortunes are sometimes easily and quickly made with small capital; for should the commodity you buy rise steadily without falling, you may buy and sell, and with the proceeds repeat again and again, with much cumulative profit, especially on a "margin."

Value is variable, but may change uniformly in several commodities, money included, without changing prices, as we have shown in Diagrams 0, 5 and 10, but any change in the relativity of values is shown by prices. Prices are simply the report of the relationship of value. To aid your mind it is well to remember that set price, rigidly speaking, can not fluctuate; for instance, the price five cents a pound can not fluctuate. It is always five cents a pound, and can not change, but the relationship of the value of a commodity may change, in which case it is represented by a new price, and five cents a pound, or the old price, does not show the new relationship; or relative value fluctuates from one price to another or from one relative value to another.

NOTE.—It would be convenient if we could introduce into this discussion the word "*valence*," to mean the same thing as relative value; then a table of relative values would be a table of valences, and the standard valence would be one, or unity, as in the table which we constructed the valence of money is always one, or unity; that is what makes it to be money.

Also if we could employ the word "*valic*" to mean the same as the term *of value*, or the expression *pertaining to value*, the standard value would be the valic standard, as, for example, the value of a United States dollar.

This might and should have its correspondence in the matter of weight. Specific gravity would be *gravence*. Gravic would mean of, or pertaining to, weight.

When you look at a gold dollar, remember that its value is the standard value for measuring or computing

value; its value is the measure of value. Remember that its value is always one, so the expression for the value of an equal weight of any other commodity would give its relative value. This would be true in the same proportion if we took any multiple of this weight, which we did when we took the pound avoirdupois for comparison. Therefore the relative value of the material money is always one, and its price never changes, and the relative value of any other commodity is but the true mathematical expression for its price, and fluctuations in price are simply changes in relative value. The value of several articles may, as we have shown, increase or decrease uniformly without any change in relative value or price among them.

Another convenient term in the science of valics would be a word indicating a commodity sold by weight. If such a commodity were called, for instance, a *poise*, then money would be a poise, and the general rules governing the value of money are the same as those governing the value of all other commodities or poises. Money would be the poise of standard value.

CHAPTER V.

What Is Value?

To say that value is "purchasing power" shows our conception of the meaning of the word, but does not throw light upon the origin or nature of this powerful elusiveness, lighter than ether, that so sways and burdens the world.

It is easy to see that relative value indicates relative command of the services of men. To the person who does not own a certain commodity, but who owes it or who must acquire it, it represents relative difficulty of acquisition, the relative expenditure of labor or time at labor, wages, necessary to obtain it, not *cost of production*; for cost of production is past, we supposing that by cost of production is meant the expenditure necessary to put a thing on the market; for price or value depends not upon what Labor has done in the past upon an article, but upon what Labor will do for it right now in the immediate future.

An article at 10 cents per pound has twice the command per pound over your services that an article at 5 cents per pound has, and this is so whether you have a salary of \$1,000 per month or any other.

As this is true of one, so it is true of every man in the world, or of all workingmen collectively, or of what is

specifically called "Labor." So relative value indicates relative command over Labor. Now whether Value indicates *command of labor* or whether it indicates *difficulty of acquisition* depends upon whether a man works to obtain it or whether it causes or makes somebody to work for him. In either case it represents *command over the services of men*, or, as we have said, command of Labor.

As it is clear that relative value (which is only found, properly speaking, among commodities sold by weight) shows *relative* command over the services of men, so it is, therefore, plain that value indicates command over the services of men, or over their disposition to work; for if a man will not work, value does not tempt him. Therefore value indicates command over industrious mankind, or over Labor, and relative value indicates the relative strength of this command as among different commodities.

For all practical purposes of the reasoning of man, for all purposes of comparison or computation, value must be regarded as "intrinsic," inherent, or resident within a commodity, that is, just as weight resides within a substance. But weight does not fluctuate as does value, for at times there is apparently more value within the same substance than at others.

But, as a matter of the deep science of both gravity and value, "the Lord gave, and the Lord may take away."

The lord of value, or the cause of value, is man; but for man, there would be no value in anything. It exists with him, originated with him, and would die with him. It is peculiarly a human attribute, or, rather, an arti-

ficial attribute of certain substances due entirely to human agency. It can not be indicated by any balance or gauge but that which comes through the markets, or because of the natural tendency of man to trade or exchange what he has for something he prefers, so that both parties to a trade are usually gainers in felicity.

Nearly all of us like domination; we all desire value, which is command over human services, the same thing as having a storage battery that will set a hired man in motion, for there is always some place where this essence or influence (value) is wanted, and where labor is done for it, and in turn it may be done again, but any material may carry less of this power at some times than at others.

Gold has so much of this power that the owners of the gold indebtedness of the world hold the world in bondage, and their title, under the present system of gold monometallism and attendant perversions of right, reason, truth, and justice, must last forever. "Man gave, and man may take away;" and in the case of weight, "the Lord gave, and the Lord may take away;" for we do not know that the attraction of gravitation shall be eternal.

Value is taken away from any commodity in two different ways: (1) By increasing the stock or quantity offered in the market; (2) by decreasing the labor offered for it, which is noted in the market by lighter and less enthusiastic offers of value (command over services, *practically labor*), which accompany the decline in its purchasing power. This latter way is the way in which we propose to decrease the value of gold, that is, by not using it to hire men with, by not accepting it as wages.

or pay of labor. The latter method, it will be noticed, is the more certain, absolute, and efficacious way; for the first method is dilution, but the latter method is subtraction, or rather extraction. If half of its value should slip out of gold, the gold debts of the world would be half paid, as far as the burden upon Labor is concerned, though not a stroke of work should be done, though they would not be in any part at all paid, as far as materially and morally satisfying the obligation is concerned; this can only be discharged by the delivery of the material, and has nothing whatever to do with its value.

In the case of gravity it is very likely, for some reasons known, that there is no weight inherent in a substance, but that for certain extraneous causes it is possessed of gravity. These depend upon the method of the creation of the universe, and involve a discussion of the science of chemical union (were there no such thing as chemical union, the world, such as it is, could never have been formed), heat, motion, the problem of plus and minus weight, or centrifugal and centripetal motion, and a system of reasoning, where the mind of man, not yet being fully reinforced by scientific fact or theory, must float in rather thin air—a discussion here of which would be out of place.

In fact, a man must not be too sure that his soul is his own, or resides integrally or disconnectedly within him.

However, for all practical purposes of human computation, weight may be considered as residing within any substance, as, for instance, lead, and its strength in

lead as compared among other substances is shown by the specific gravity of lead.

For all practical purposes of commerce and computation, it is quite as much so with value, and value may be said to reside within a community, as, for instance, copper, and its relative strength in copper as compared among other substances is shown by the relative value of copper, which is but another expression for its price.

In the consideration of weight, or gravity, we may regard weight as dissolved in volume. In the consideration of value, we may regard value as dissolved in weight, or as homogeneously permeating weight.

The man who speaks of, or at least who thinks of or in, paper money, can not be logical, at least to my mind. I do not pretend to curtail the use of "paper money," or paper in any form, that is, when it is found to be a convenience, but the value of any paper depends on the value of some material, and it is "bad" when the material which it pretends to stand as a title for, can not be gotten for it.

In the consideration of gravity the mind can go no further than to say that gravity depends upon or is caused by conditions brought about by the mind of the Creator of the universe. This is the last refuge of human reason, in a sense an acknowledgment of defeat or inadequacy, or that the mind of man is not able to bring the facts into harmonious subjection under any theory, though the time will come when "there is nothing covered that shall not be revealed." As in the mind of God "there is no variableness nor shadow of change," specific gravity does not vary, and weight is not change-

able (that is, considered with reference to time). There can not be the least doubt but that value is a resultant brought about by conditions that are caused by the desires of men, and as with man is much variableness and change, so indeed is value variable and price changeable.

CHAPTER VI.

Definition of Money.

A very widely accepted definition of money, which is by many called "exact," is the following: "Money is that which passes from hand throughout the community in final discharge of debt, and final payment for commodities, being accepted equally without reference to the character or the credit of the person who offers it, and without the intention of the person who receives it to consume it, or enjoy it, or apply it to any other use than in turn to tender it to others in discharge of debts or full payment for commodities." (Walker, in "Money Trade and Industry.")

The above is a fearful example of what is, and has been accepted as a definition in the inchoate state of a science such as is now taught in our colleges and called the science of Political Economy. Political Economy is hardly up to chemistry as it was under the phlogiston or spirit or fire theory.

Such a definition does not afford the mind firm support for grasping any fundamental truth. Any truth of science is short and easily told, always harmonizes with every other truth, for if it did not it could not be true, is never isolated, but always connected as a leaf, or a bud, or a twig, or a branch, but must always be

absolutely true, not moderately true but exactly true, and if not exactly true, must be either not true itself or that by which it is compared is not true. There may possibly be such a thing as a moderately honorable man, a moderately virtuous woman, but there is no such thing in science as a moderately true truth.

However, there are several common definitions of money that almost reach exactness, compiled by men who had some light, that is, saw as through a glass darkly, but not quite enough to definitely outline each idea.

Among these are the following, taken in order:—

1. Money is the medium of exchange.
2. Money is the measure of value.
3. Money is the standard of value.

1. As to this first definition we have clearly shown that *value is the medium of exchange* in all commercial transactions, and the use of money furnishes the means of expressing and accounting or computing value. Quantities of value are expressed by means of money, or, in other words, it is the value of quantities of money that is used to express quantity of value. Commodities are exchanged by means of their value.

2. By precise reason money *can not* be a *measure of value*, it being a metal or metallic alloy, but the value of a unit weight of money, or what we have called a "money unit," and what is frequently called an "account unit," is the measure of value. In the United States this account unit is 25.8 grains of minted United States gold, known as United States gold coin, which is the money of the United States.

25.8 grains is a mint weight or standard weight used for weighing the money of the United States.

Therefore the "measure of value" is the "unit of value," which is the value of the "money unit."

In the United States the money unit is the gold dollar, and its value is the value unit (the dollar's worth), and is used for measuring value in the United States, which value is computed in accounts, etc.

3. No metal, such, for instance, as the alloy, which is money can be a standard of value. The standard of value *must be* and *is* of value.

Money is the substance whose *value* is the standard value. As the value of each substance in trade, or commodity, is referred to or related or compared to the value of money, therefore the relative value of money becomes one, or unity, it being the standard, and the relative value of the others is expressed by the numbers showing the strength of their respective value as compared to the value of money, which being the standard value, its strength, therefore, is always one, or unity.

Heretofore we have said that the true definition of money is this, viz., money is that substance whose relative value is the standard of relative value; or, what is the same thing, money is that substance whose relative value is one. In computation a standard is always mathematically a unity, or it always counts one.

We have done this in order to be clear and not to confuse the mind of a beginner, but after all it is enough to say that money is that substance whose value is the standard of value, for being a standard of value means that it is relative as other values are compared or related to it.

Again, value can not be a standard for any other thing besides value; if a standard at all, it must naturally be a standard of value.

So that in reality for those who have studied into the matter it is enough to say money is that substance whose value is the standard, which is more laconic, but this can even be improved upon, and finally we have this definition of money, viz., *Money is the commodity (or substance) of standard value.* In the U. S. it is gold coin which is always worth one dollar the 25.8 grains, or \$271.3178 76-258 per pound. And to this value per pound are all the other values per pound compared. The value of a pound of U. S. money always contains the value of the same number of value dollars that its weight contains of weight dollars. This is not true of any other commodity, and this is because money is the *commodity of standard value.*

In tables of specific gravity water is that substance whose weight is the standard of relative weight, but as weight or gravity can not be the standard for anything but weight or gravity, therefore water is that substance whose gravity is the standard, or it is the substance of standard gravity. Other substances, for example, are twice or three times or half as heavy per volume as is water. Water, therefore, in tables of specific gravity is that substance which is heavy in the ratio 1, and a table of specific gravity shows the weight of each substance in this proportion, or, as they say, as compared with an equal volume of water.

The same analogy subsists in value, tables of relative value being like with tables of specific gravity, and we have shown any market report to be but a table of relative value in another form, although this relationship has not been pointed out to mankind even by the monetary oracles of gold bug colleges.

A table of relative value shows the value of substances as compared per equal weight, and money is the substance which is valuable in the ratio 1.

The value of other commodities sold by weight, as compared with money, is their relative value. The value of a money unit like the 25.8 grains of U. S. coin might be called its absolute value, but this, as we have hitherto shown, is a variable; and, though mathematically it is unchangeable, it is so because we have voluntarily or arbitrarily made it the standard, and therefore unity (for every standard is of necessity mathematically 1, and therefore the value of 25.8 grains of U. S. gold is always one value dollar). Still, nevertheless, there can be more or less value in the dollar at different times, but that does not affect its price; its relative value or price is made to be invariably 1, so, it matters not how much its value may increase or diminish, its price or relative value is always 1. We have among ourselves agreed to call the value of 25.8 grains of U. S. gold 1, and thereby we compare other values, and in that sense it is invariable and unchangeable, but as a matter of fact it is variable in the fact that it does change, that is, becomes greater or less, or harder or easier of acquisition, or harder or easier to earn, and so does any given weight of any other substance in trade.

There is no absolute unit of value that we know of, no measure for pleasure or pain, but we do know this, that there should be no pain, and zero would show perfection; so it is in value, 0 shows perfection; good things should cost the least possible in labor, and the science of Political Economy believes in killing value, that is, by, on the grand average, making things cheap as *measured*

in *human effort*. So it would make wages high, that is, buy much of the good things of life; therefore it is utterly opposed to special privileges and thoroughly in accord with equal rights to all.

Now we are come to a pseudo (false) definition of money, and the most pernicious known, and upon which gold standard writers, these berserker scientists of Political Economy, have built a superstructure of error in defense of that Moloch of modern civilization known as gold monometallism.

1. A standard of future payments.
2. A standard of deferred payments.

We assume that deferred payments are the same as future payments. The payment of anything (if paid at all) is deferred until it is paid, and when it is paid it is paid, and is an accomplished fact, a payment made and past.

So that a payment must be past and can not be future. It is a compliance, a fulfilment. There may be an obligation or promise to make a payment at some future time, and if complied with, then at that time the payment becomes past. So that all of these must be in this sense future, and they are all obligations to pay in the future. So we come down to the fact that there is no necessity for the word "future," and we cut the definition down to, Money is the standard of payments.

Let us now look into the word "standard." There can be no "standard of payments" further than the moral obligation to pay what is owed. There can be no standard payment further than the exact payment of what has been agreed to be paid, whether that be money, wheat, silver, brick, or iron, or any other com-

modity. No one commodity can be any holier than another, and the obligation to deliver money is no more nor less sacred than the obligation to deliver any other commodity; and legal construction of obligation founded on any other idea, being false in theory, is pernicious in practise, and therefore against public policy and against public morals; for Public Economy is a science so exact that nothing logically wrong, incongruous, or inharmonious, can possibly be practically right, and nothing practically wrong can possibly be logically or theoretically right. Therefore, if an individual, a man, or a nation owes a quantity of gold, when he pays that quantity of gold he has honestly, fully, and morally discharged that obligation, whether that gold cost little, much, or practically no labor.

CHAPTER VII

Changes in Relative Value or Fluctuations in Price.

Relative value indicates relative command over the services of men. Anything that will increase this tends to increase the price, and *vice versa*. Relative value is the pointer of the gauge (the markets). All markets are labor markets, not of labor that has been done, for that is past and turns no wheel in the market, but of labor that will be done.

A dollar is worth a dollar, not because of the bygone industry by which the metal is in your possession, but for the labor that will be done or is offered to be done now in order to get it out of your possession, and so with any other commodity. Things are made valuable very largely by keeping people from having them, and sometimes by exclusion acts like the law of gold monometallism, which excludes anything else from competition with gold as money, and was made to benefit the bond trust and to the injury of the industry of the world. It is right that a man should exclusively have that which he has honestly earned, but not that which some one else has honestly earned. It is said that price is governed by cost of production, but it is rather the cost of production that is limited by price, for price depends upon what labor will do to obtain an article rather than upon what labor has done to bring it into market.

In fact, the price of a thing shows what it will do in the matter of purchasing labor, as compared with what other things will do.

If it cost more to produce an article than its price in the market will pay, then production ceases. It is here that competition stops.

Improved methods and cheaper power mean more cheaply produced goods. True progress means increase in the ease of production, or decrease in the relative amount of labor or human effort needed, or it means increase in the return for that labor.

In this "cheap" goods does not mean cheap men, but means dear men, high men, men of high attainment. This sort of cheapness does not injure the useful world, but the trouble is that the distribution of blessings under our system is not fair; the men who earn the good things of this life do not get their share. If things were properly or justly contrived, we would all be rich in blessings and poor as far as colossal unearned fortunes were concerned. There is no trouble about the amount of gold in the world, there is plenty of it, but it is not always in the right place.

A merchant trades for gain, and it does not matter to him how much work or trouble it costs to produce an article, for he buys it only for the profit there may be in it, and is only an agent between buyers or an assistant in the work of distribution. These buyers sometimes buy with commodities, and they sometimes buy with money, just as the merchant does in the market (perhaps his own store); for when he buys goods, he sells money, and when he sells goods he buys money.

A "consumer" must always be a "producer." He

must "produce" something for the markets or he could not buy what he consumes.

If he does not sell labor, then he must "produce" merchandise, the product of some other man's labor, or the product of his own labor, or at least he must produce or have something that somebody works for or that will buy what somebody works for.

Any demand for any article in any part of the world is a demand for it all over the world, or, in other words, reaches or may reach every part of the world, and is only checked by cost of production and transportation, that is the movement is only stopped by friction, not but what there is a "pull" upon the article, but it is not strong enough to move it, and as soon as this friction is sufficiently decreased it starts to move. This is done by cheaper transportation and production, or sometimes the "pull" is increased, that is, the relative value becomes greater or price higher; for instance, the "pull" on silver at 16 to 1 is strong enough to "move" it out of nearly every mine in Colorado, but at 32 to 1 it is not, and it takes a most extraordinary mine to pay at that rate.

Any demand for any article in any part of the world affects the whole world, and this is especially true of an article like gold.

Nations the farthest apart are frequently benefited or injured by each other through this fact.

The mountaineer of the Appalachians is benefited by the demand in China for ginseng, and many a good dollar for many years past that in reality came from China has gone to buy dry goods and provisions in the homes of men in the southeastern United States who

otherwise would not have been blessed with this revenue and source of comfort.

As this in this case acted beneficially so it may act injuriously in other cases; for as this is true of one commodity, so it is true of all. In the case of gold, the demand for which under constantly accelerating increase of indebtedness is constantly increasing, any gold debt made by any one nation in the world affects the demand all over the world.

It does not matter whether these debts be public or private or corporate, the rule is the same, and they can all be added together as forming one injurious mass upon the back of the industrious world (Labor).

So that in the matter of indebtedness, especially with increased facility of transportation, workingmen all over the world must "bear one another's burdens," or, in other words, they altogether bear one burden, and the burden of debt is value, or the amount of labor it purchases, and this command over the labor of the world is the power of the money kings of the world, who own mankind as slaves and collect constant tribute; or, in other words, the world is mortgaged to them, and they collect constant and eternal rent, from which, as is absolutely demonstrable, under present conditions, with gold monometallism, mankind can never possibly be released or humanity freed; and upon this cross, this Caiaphas of Gold Monometallism would have not one workingman only, but all workingmen, crucified. So thoroughly has this high priest trained his followers that they forget that they are in effect murderers, and if a man dare to raise his voice against this tenet of the Church of Political Economy as now ministered and

taught in our highest schools, he is almost called traitorous, as speaking against good government, and by many really well meaning but ignorant patriots is considered as dangerous, rebellious, and heretical, as being of those who destroy rather than build up. Prices and production are influenced by a falling away of demand, and great industries have been abandoned on this account. The cultivation of the madder plant and the production of madder, a red dye extracted from its root, were once very important industries in Europe, but the invention of aniline dyes furnished cheaper substitutes and resulted in the abandonment of these industries; and similar examples regarding other industries could be mentioned. Anything in the market consists of material and the labor it takes to put it there, and it is a fact that no material, considered strictly of itself, ever costs anything. It is the gracious gift of nature, or, as some say, of God.

So it is with gems, metals, woods, and fabrics, and all articles—mineral, vegetable, or animal. So, somehow or other, we are only exchanging the labor of men. But men do not desire a thing because of the work or trouble it causes to get it, but because of something connected with the material only, and material sells not the labor that has been done but the labor that can or will be done, or the labor that men will do or are willing to continue doing; and the man who finally uses it or finalizes it, as in clothing, provisions, etc., desires it, not for the labor it cost, but for the desires, wants, or necessities it satisfies. So this subject is not quite yet clarified, but will be later.

People will naturally take a commodity to their best

market (so far as they know), and by looking into the matter we discover the following *great rule* of value, viz.:—

If transportation cost zero and were instantaneous, contemporaneous, prices would be the same the world over.

We would for the same moment have exactly the same market report all over the world and exactly the same relative values everywhere. The price of any one article of merchandise would have the same "level" everywhere. So that a Barrel of Flour, Bale of Cotton, Sealskin, Cask of Sugar, Sack of Coffee, Ton of Iron, or any quantity of any merchandise whatsoever, would have at the same time the same price in Dakota, India, England, China, Russia, or Australia, or at any or every point in the world.

It is said that prices or trade seeks its "level," but value, unlike water, seems rather to run up than down; that is, commodities go from points of low value to points of high value. This is explained by taking any given article, and wherever there is a point of "high value" it must be a point of "low commodity," or low supply and commodities naturally run in here and bring the value down, and so all over the ocean, until all is level; and, as we said before, did transportation cost zero, and were it instantaneous, prices would be the same the world over. It is a fact that this process of trade seeking its level goes on now. Every improvement whereby transportation is cheapened or facilitated brings the world nearer and nearer to this state of affairs. Every improvement in ocean vessels means cheaper carriage. Every improvement in locomotives or arrangement whereby less coal is burnt or less human

labor involved, brings us nearer and nearer to this point until we shall approach infinitely near it and almost practically reach it. It pays to transport cheaper and cheaper commodities, transportation costing less and less value per pound, or taking less and less human labor to carry the freight; for any other labor or power does not in a sense cost anything more than the human labor required to keep it operating.

This rule has always been working, but more in latter years, and we frequently hear the expression, "Trade seeks its level." As commodities are more cheaply transported, so are men, and they "run to and fro, and knowledge is increased."

We of the United States are nearer to Asia than we were to Europe 30 years ago and Time is teeming, and there is no knowing what a few years may bring forth. In time the walls surrounding countries will be broken down, and all men will as brethren be, and the world will become one country, and humanity one people, and peace on earth and good-will toward men will prevail in a world filled with intelligent activity, overflowing with bounty, and bright in hope and happiness. But this can never be until true political economy is more generally understood, old baleful idols, like the gold standard, destroyed, and government founded on scientific principles which of necessity are just and simple; for the yoke of Truth is easy and the burden of Love is light.

CHAPTER VIII.

Graphic Record of Price, or Relative Value.

Suppose that we represent the relative value of any commodity by a point, situated at the height above a level zero line that would indicate its relative value, and traveling across the page from left to right with regular pace, so that any unit of time would be represented by a regular horizontal distance.

Equal horizontal distances would mean equal times, and any perpendicular line on the page, whether real or imaginary, would represent the same instant of time. In the diagram we have made every perpendicular line to represent a certain time of day, say at 12 M., or noon, and each horizontal space represents 24 hours, so that the diagram represents a month of 31 days.

Our moving point representing the relative value of any commodity, would leave an exact record of relative value as it moved across the page. These lines of relative value or price orbits would rise and fall and fluctuate in height exactly as prices do. The line for money would always be level, and a straight line across the page for its relative value or price, being the standard, is always the same and can not fluctuate, and it would be at the distance *unity* above the zero level; for, as we have proved before, the relative value of money is always a mathematical unity.

We might elect to divide this unity into 100 parts, as we did before in this treatise, but if we divided the unity or price of American money into 27131.78 76-258 parts, or placed it at a distance of 27131.78 76-258 above the zero level, then every perpendicular unit space in the diagram would represent 1 cent per pound. (In our diagram we have subdivided the unit space of 1 cent into 8 parts so that the height of every little quadrangle represents 1-8 of a cent per pound.)

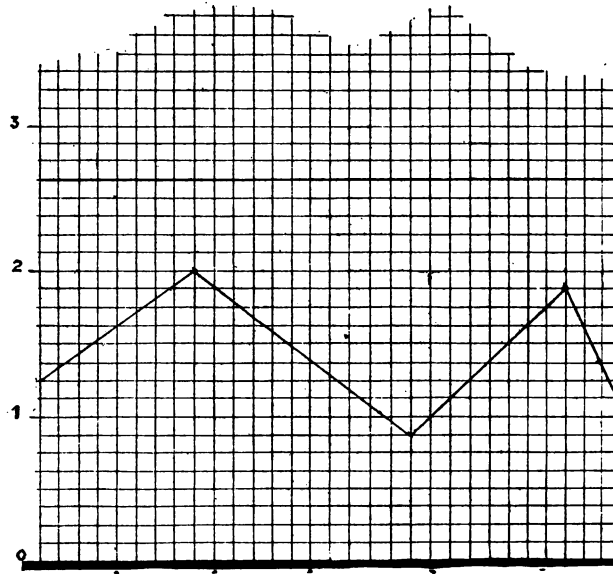
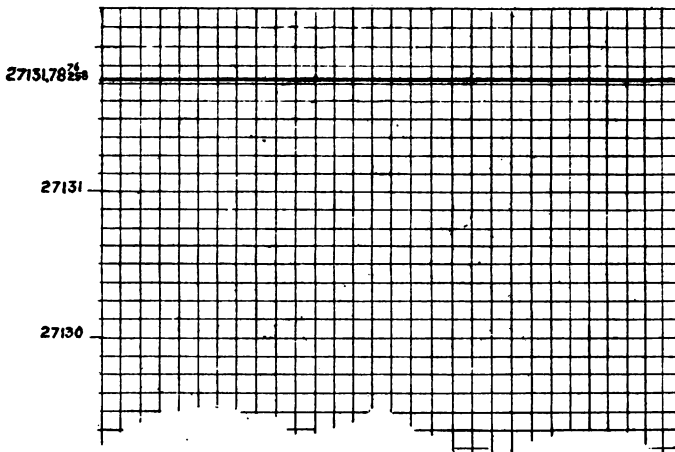
Of course no page would be tall enough to take in the whole diagram but we are enabled to give the idea by a common easy device apparent at first sight.

As American money is always worth 27131.78 76-258 cents per avoirdupois pound, its relative value is represented by a straight level line across the page at the height 27131.78 76-258.

Now any price not fluctuating would be represented by a level line, as we have indicated a commodity selling at 2 5-8 cents per pound for the whole month.

We have also represented a commodity at $1\frac{1}{4}$ cents per pound on the 1st, 2 cents on the 9th, $\frac{3}{4}$ on the 20th, $1\frac{1}{8}$ on the 28th, and $1\frac{1}{4}$ on the 31st. Now by this scheme the prices of all commodities as compared to American money could be kept through all time, each one moving in its proper place and giving at a glance their relative value or their exact position in trade as they affect the labor of the world.

This would be a most excellent educational device, and one that probably might be issued monthly by the government, to the advantage of the people; at any rate, it should be kept in any college where the science of value is taught. Of course some particular principal market should be selected.



This illustrates United States or American prices of commodities exchanged by weight (money included) in cents per pound.

This scheme of course applies to every money in the world, but the diagram would have to be made in accordance with each system of money and coinage. We have made them for English, French, and German coinage and money, and the diagrams will be found under those heads. This scheme shows at a glance at any instant how many pounds of any commodity a pound of money will buy, which shows or is the relative value or price, besides leaving a constant, faithful, instant, scientific and practical record for future reference.

Now let us revert to the analogy of specific gravity. If we did a corresponding thing for specific gravity, the line representing the specific gravity of any substance would be horizontal, that is, it would not fluctuate, or is the same at all times, and the specific gravity of any number of substances if represented in this way would be a set of level parallel lines. If the height for the specific gravity of water were 1, then the height of any substance having a specific gravity of 10 would be at the height 10 above the zero level, which height would be constant and a level line, and so correspondingly with every other substance.

We can, after a fashion, imagine the average price of any commodity, which would be the same as averaging the fluctuations for a certain time and representing the general average by a straight line across the page, and after some sort of a fashion we would have a set of horizontal or level lines.

Now turning to specific gravity, suppose we take a number of substances, and average their specific gravity, we would get as a result a number that might be called an average specific gravity of those substances, but in

reality would not mean the specific gravity of anything, or would not in truth show or illustrate anything, nor subserve any scientific purpose, so far as I can see.

So it would be if we averaged the prices of a number of articles; we can not imagine an average price for a number of articles continued through years of time any better or hardly as well as we can imagine an average specific gravity for a number of substances; and, after all, it does not mean the average price of any article; and, what is more to the point, it does not seem to our mind to be of any exact scientific use; and we derive little or no mental encouragement, support, or comfort from the idea, and do not see the logic or true science in any theory built upon what are called average prices or averages of price, whether of 2 or 67 or 45 or 100 articles. To our mind nearly every distinct article in trade rests upon its own bottom, as far as prices go, and a commodity may be forced to the skies or to the ground without affecting the inter-relativity of the others.

However, the idea may sometimes subserve some purpose in a general way, in some few cases, as, for instance, showing the fall of silver under demonetization, but certainly no system of true monetary science can be built up upon it. Moreover, these old prices, etc., are past, and Political Economy is a science for the future, and they only serve by comparison; they are like paid-up old accounts.

Past time, like spilt milk, is not to be cried over, and turns no wheel. It is the future that must be looked to, and the present only as it passes that can be employed; and the business of the political economist is to

do what he can to get and keep this world out of trouble, or to be a guide, with his little lamp up against the black bank of ignorance, to lead in the right road; and the first thing to be done is to get out of this valley of this shadow of industrial degradation, which is the result of the theory of the gold standard, with its attendant sophistries, delusions, and illusions.

CHAPTER IX.

Coins, Counters, and Paper Money.

A coin is a legal ingot; when made of money, it always counts its own value, as it weighs its own weight, as do the gold coins of the U. S. and England and the silver dollars of Mexico. When a coin is not made of money, it is a counter for the value of the money it betokens or signifies, and is then called a token coin. If a token coin is "good" it is good for the value of the money it betokens or indicates, or for the value of its name, or for what is called its "nominal" value, from *Nomen*, meaning name. Coinage became general only a very long time after money was common, and mankind had a comparatively fair idea of money long before it had any accurate system of mintage.

The first thing that was made certain was a definite weight; the next thing was definite material; and an accurate system of coinage came with a better knowledge of chemistry, improved processes of refining, exact scales, and improved appliances for melting, mixing, weighing, and stamping. The operation of coinage, which is a weighing and stamping of ingots of metal, must be preceded by making standard bullion, which must be exact in composition and well mixed or homogeneous.

The banks of Venice, it is said, did business with a "money unit" for hundreds of years before they had coins struck of that denomination.

Germany and France have never struck any money coins of their single money unit of the mark, or franc, but they have struck millions of multiples thereof, or millions of marks and francs. In the case of the Venetian banks it was only necessary to agree in each particular case on the quantity of money metal contained in each piece or lot.

The Bank of England weighs sovereigns to this day rather than counts them by tale, or by number of pieces, as we usually count money coins, it being in effect but another way of weighing money; when the gold coins of the U. S. get below the "limit of tolerance," they are received by weight.

The coinage of coins that are not of money consists of stamping upon metal an obligation tacitly implied or sometimes (as in the case of the U. S.) with explicit directness by law declared, which obligation is to keep these coins as good as the money they indicate.

The only difference between token coins and paper money is that in the latter case the obligation is printed on pieces of paper, usually called "bills" or "notes;" in their nature they are not essentially or scientifically different from token coins, wherein the obligation is stamped upon metal. The melting of a token coin does not or ought not really to destroy the obligation; it only destroys the evidence of that obligation, and if it could be proved beyond a doubt that \$10,000 in U. S. coin silver were melted in a fire, it would be just that the government make it good upon presentation of the melted bullion or junk.

Token coins or bills may be kept as good as the money they represent, by, in the ultimate case, redemption with money, or when the number presented is not too great, by taking them for public dues, which is only another way of redeeming them. If you hold a note against the government and it has an account in which there is a demand against you for an amount equal to the note, and you set that note off against the demand, then you are square or clear; of course you surrender the note, which ingresses into the treasury. So it is with individuals and the U. S. Government, and its taxes at the custom-house and other places.

When a bill has entered the treasury, of course it is worth zero to the U. S., or it represents nothing, it is simply an obligation canceled or non-existent; nevertheless, the great treasurer of the U. S. calls it cash or money in the treasury, to the edification of the great public of the U. S.; for it seems that on the money question it is possible to "fool all of the people all of the time."

Coins made of money may belong to the government, and may not, such, for instance, as the gold coins of England and the U. S.

Coins not made of money are *always* practically the *property* of the government, for the very simple reason that the material of which they are made is always of less value than is the money which they represent, or, in other words, of which they are the promise to pay; that is, they are simply the material on which the promise to pay is engraved. The metal value of the token coin, or the value of the token considered strictly *per se*, without reference to any government

stamping it, meaning the bullion value, is always less than the money value which it represents, because otherwise people would never attempt to redeem it, but would melt it and sell the junk for more "redemption money" than they could get by having it redeemed. This is what happens in the "bimetallic" system of 16 to 1, when 16 weight of silver is worth more than 1 weight of gold, or when 1 silver dollar is worth more than 1 gold dollar. This was remedied in the United States by stopping the coinage of silver dollars, and by making the half dollars, quarters, etc., of light weight, as was done in the United States in 1853, at which time the light subsidiary halves, quarters, etc., were ordered to be printed.

A similar thing now happens in China, whereby the copper "cash" representing a tael of silver are worth, owing to the recent increase in the relative value of copper, more than the tael of silver which they represent, whereby thrifty Chinese melt up the "cash" and sell it for junk at a profit, to the annoyance of the Chinese Government, treasury, and mint. This sort of "endless chain" is not profitable to the revenues of China; this anomaly will probably be remedied by in the future making the "cash" lighter in weight.

The coinage of token coins is always limited, that is, they are only coined on government account. No private person or firm can have them coined, for the government stands responsible for their *nominal* value. Their circulation is also limited, for more than are needed in trade will naturally pile up in the treasury, as is the case with the present United States silver dollars.

Not so many spielmarks or "chips" being needed, naturally the excess piles up at the "redeemery," or treasury, which in this particular case corresponds to the "bank" in a gambling game.

No government can or ever has been able to issue and circulate such tokens unlimitedly and at the same time assure their equal purchasing power with that of the money they signify or represent "in the markets at all times."

The mistaken idea that there can be any money but a true weight money is responsible for the clap-trap expression in American politics of a "flexible" money, or of "a safe, sound, and flexible money," which means nothing and is a politician's bait for unwary or ignorant voters. "Paper money" is of the same category with token coinage, and as "paper money" may be issued, whatever be the true money of the country, it follows that it does not affect the discussion upon the money question further than in the fact that paper money expresses debt or obligation. Therefore we drop the subject of paper money as not being essential in the matter of monetary discussion. We do not think that general U. S. "legal tender" laws are really necessary, or that they help the "credit" of the country. We can not see why the U. S. Government should force its notes upon any of its citizens, and we regard the attempt or the act as unsound and as arrogant as it would be to force the note of any private citizen upon any other.

Probably if there were no national "legal tender" laws of any kind, the finances of this country or of every country would necessarily be "sounder" and

could never at any time have gotten very "unsound."

The following is copied from a work on Political Economy, by Arthur Latham Perry, often used as a text-book in the colleges and other schools of the U. S.:—

"When after a long time the question of the constitutional right of Congress to make a *promise* a legal tender for debt (for money G. R.), that is to say, to make a promise the same thing legally as its fulfilment, a monstrous incongruity, was brought up to the Supreme Court of the U. S., the majority of the court, including Chief Justice Chase, who, as Secretary of the Treasury, had recommended the opposite, decided, after most elaborate argument and deliberate consideration, that the Constitution gave no authority to Congress to create a paper legal tender which could apply to pre-existing contracts; and some of the judges held that it was equally unconstitutional to compel parties, in the absence of mutual agreements to that end, to receive such paper promises in fulfilment of contracts even made subsequently to the passage of the law. After this decision was thus solemnly rendered, two new judges, whose opinions on the point were known beforehand, and who were selected on that very account, were put upon the bench, and this change in the *personnel* of the court was made the means of reversing the decision.

"*No new points* therefor were raised by either of the new judges or by the counsel in the new trial, and the Chief Justice and his associates still adhered to their former opinions. It is scarcely needful to add that the Supreme Court of the U. S. suffered in the judg-

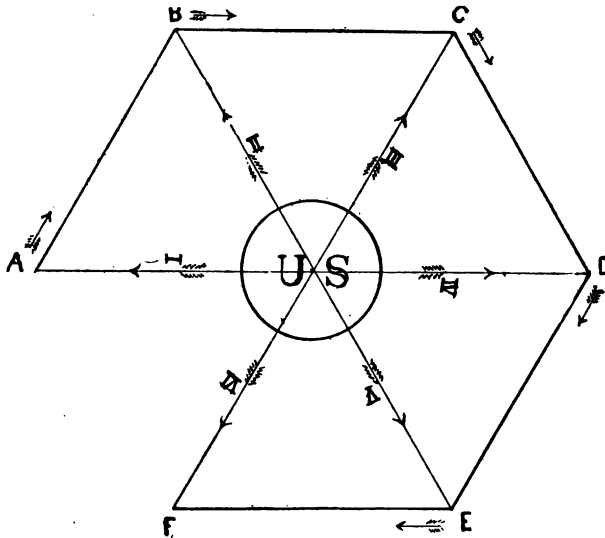
ment of good citizens by that transaction, that the best legal and financial opinion in the country yielded little respect to a decision thus secured, and that intelligent people do not believe that constitutional law *can sanction* what contravenes common sense and common morality. Judge Field, one of the majority in the first decision, uses this just language in respect to the second, in which he could not concur: 'It follows, then, from the doctrine advanced by the majority of the court as to the power of Congress over legal tender, that Congress may borrow gold upon a pledge to repay gold at the maturity of its obligations, and yet, in direct disregard of its pledges, in open violation of faith, may compel the lender to take, in place of the gold stipulated, its own promises; and that legislation of this character would not be in violation of the Constitution, but in harmony with its letter and spirit. What is this but declaring that repudiation by the government of the United States of its solemn obligations would be constitutional?' "

The financial stability of the U. S. does not in anywise depend upon any legal tender law, but upon its resources. The resources of the U. S. consist in taxes, and its ability to pay depends upon what it owes as compared to what it can tax out of the Great American Republic. These taxes represent the labor of American industry, without which the government could not stand, and we are writing in the interest of justice, and of this large, uninfluential, and little respected, industrious class against whose interests legislation is frequently, we might say usually, directed.

There is one feature or function of token coins and

paper money not often explained, which is the following; whenever I own a paper U. S. \$10 bill it means that the U. S. Government owes me \$10; when I pass it to you in payment of a \$10 debt, it means that the U. S. Government now owes you \$10, and I am "clear" as far as that \$10 concerns the U. S. or myself. The token coins and paper money of the U. S. serve to establish a public clearing house, in which the number of members is unlimited or only limited by their ability to acquire U. S. notes and to use them in the payment of debts. We have tried to illustrate this by the diagram, in which U. S. represents the U. S. Government, and the letters A, etc. represent individuals. A has a \$10 bill, which means that the U. S. owes A \$10; now A owes B \$10, and gives him this bill; now A has cleared as far as B is concerned, and the U. S. has cleared as far as A is concerned with that \$10 bill; now the lines U. S. A and A B no longer exist; they may be considered as having "cleared" or disappeared, and B now owes C \$10, and gives him the bill, wherefore B has cleared with C, and the U. S. with B, and therefore the lines U. S. B and B C we may now consider as having disappeared, and we may go on with the same reasoning till we get to F, where the U. S. owes F \$10, as indicated by the arrow line VI, the same as the line U. S. F; and all the other arrow lines may be considered as non-existent; that is, the periphery from A to F and all the radii except the one to F. Now this bill has paid \$10 at B, C, D, E, and F, or \$50 of indebtedness, and the U. S. remains as it was before; that is, it still owes this \$10, but instead of owing it to A it owes it to F. Now if F should owe A \$10 and pay it, the bill would

be exactly where it was at the beginning, and would have paid \$60 in debts and be just as good as it was before for an indefinite continuation of this process. This is what some people call "discharging the money function," but it does not happen to be the discharging of the money function; it simply acts as a counter for \$10, which remains or can be gotten at the U. S.



treasury. Some people seem to think that the paying of debts is the "money function," but it is not the money function; money debts are paid with money; debts in bricks are paid with bricks, and copper debts are paid with copper. Any recognized and undisputed debt where time is not an element becomes an order or draft such as is represented by any good bank check or written order or U. S. note, and if it is thoroughly "good," the debtor is of undoubted solvency and pos-

sesses the instant ability and willingness to pay, and the cash awaits its presentation, whereby it is said to be as "good" as money, but it is *not* money by any manner of means, and if it could not be exchanged for money would never be said to be as good as money.

Now let us revert back to our U. S. bills; as debts are constantly being incurred and discharged, or debts are constantly being made and paid, it happens that more bills may be out than there is money in the treasury to redeem all at any one time; for as they go flying around the country in a countless multiplicity of directions, they are not presented at each payment for redemption, but that does not mean that the U. S. needs a legal tender law, nor that bills can be money, nor that the U. S. should not stand ready at any moment to redeem any possible number of them that could be presented; for if she does not, her "currency" will certainly be "unsound," or will not be "safe, sound, and flexible." The only "currency" in the U. S. that I know of that can possibly be "flexible" is the paper money, and this only because any bill may be doubled upon itself an indefinite number of times without breaking, and in this respect, thanks to its very superior quality, it is more flexible than almost every other paper with which we are acquainted.

This word "flexible" is part of an American politician's trumpery, like a piece of "property" in a theater, but even less real, for the latter does serve an honest purpose, which is to represent some idea, while the former misrepresents the lack of clear idea.

In any bank of deposit, depositors are constantly taking out and putting in coin, and banks consider it safe

to lend a portion of these current deposits, say one-third or somewhat more, and draw interest upon it, which makes it possible for them to run a clearing house and warehouse for their patrons without charge, hiring clerks to keep accounts, paying rent, etc., and, besides, borrowing money and lending again at higher interest, and acting as agents in various ways for the profits that accrue from these transactions. This is when they do strictly a banking business, whereby every operation is always strictly secured, so far as it can possibly be within reason.

Note.—“When the first issue of Confederate money was scattered among the people, it was quickly taken and passed at par everywhere within the limits of the C. S. A.; it then fell, as follows:—

“June, 1861, 90 cents; December 1, 1861, 80 cents; December 15, '61, 75 cents; February 1, '62, 75 cents; February 1, '63, 20 cents; June, '63, 8 cents; January, '64, 2 cents; November, '64, $4\frac{1}{2}$ cents; January, '65, $2\frac{1}{2}$ cents; April, '65, $1\frac{1}{2}$ cents. After which date it took from \$800 to \$1,000 in Confederate bills to buy a \$1.00 greenback.”

CHAPTER X.

Weight.

Weight is the result of the tendency of matter to approach gravic centers, like the center of the earth. All bodies within the paramount influence of the earth as regarding this tendency are within its "sphere of influence," and will reach it. Gravic centers are usually (probably necessarily) in a high state of molecular agitation (heat), and especially so if they be suns or centers of planetary systems.

The gravitation of the earth or of any other celestial body may be regarded as residing like a light at its center (or better compared to an incandescent ball), and as being dispersed outward as if it were light; so it varies inversely as the square of the distance (or weakens directly as the square of the distance), and varies directly as the "mass" (power of the light). (Newton's Laws.)

Like light, it is dispersed through or permeates space according to the cube of the distance, and Kepler's third law is probably related to this fact. Kepler's laws are as follows:—

1. "Each planet moves in an ellipse in one focus of which the sun is situated."
2. "The radius vector drawn from the sun to the planet sweeps equal areas in equal times."

3. "The squares of the periodic times of the motions of the planets round the sun are in the same ratio as the cubes of their mean distances."

Gravity acts instantaneously at illimitable distances, and time does not enter as a factor in as far as what may be called "rays" of gravity are concerned. Not so with light; it takes the light of the sun about 8 minutes to reach the earth. Weight and gravity are the same, but the word "gravitation" is employed to designate the tendency that bodies have to approach gravic centers, and it is also called the "attraction of gravitation." The gravity or quantity of the power of the tendency of bodies to approach the center of the earth, or their weight, is expressed or computed by comparing it with the weight of some standard piece of material, a piece of brass in the case of the pound, deposited among the archives of the state, as in the Tower of London or in the treasury department at Washington.

Different substances are attracted with different power per cubic unit of the space they occupy or per equal volume, whereby we commonly say some substances are heavier than others, and specific gravity indicates this fact comparatively. For solids we usually take the gravity of water as the standard, but for gases hydrogen is taken and sometimes atmospheric air. When the gravity of water is taken as the standard, the specific gravity of a substance is the number that gives its relative weight as compared with the weight of an equal volume of water; or, if we may say so, it is the expression of its weight in water weights of the same volume. It tells its heaviness in water heaviness.

The metric standard weight is the weight of a cubic

centimeter of water at its greatest density, being 4 degrees Centigrade. The meter is deposited at Paris and was obtained by measuring an arc of the earth, being one-ten-millionth of a quadrant. In the U. S. and England avoirdupois weight is by far the most general, and is used for weighing nearly everything but gold and silver bullion, money, drugs in prescriptions, and chemicals in laboratory experiments.

The grain, troy, avoirdupois, and apothecary, is the same.

AVOIRDUPOIS.

27 $\frac{1}{4}$ grains	=	1 dram	=	27 $\frac{1}{4}$ grains
16 grams	=	1 ounce	=	437.5 grains
16 ounces	=	1 pound	=	7000.0 grains
1 lb. = 16 oz.	=	7000. grains	=	453.5926 grammes
1 oz.	=	437.5 grains	=	28.3495 grammes
1 net ton, 2000 lbs.	=	907. kilogrammes		
1 cu. ft. water 62 F.	=	62.3550 lbs. av.	=	28315.0000 grammes.
1 cu. inch water 62 F.	=	0.0361 lb. av.	=	16.3862 grammes.

TROY.

24 grains	=	1 pennyweight	=	24 grains.
20 pennyweight	=	1 ounce	=	480 "
12 ounces	=	1 pound	=	5760 "
lb.	oz.	dwt.	grain	gramme
1	= 12	= 240	= 5760	= 373.2419
	1	= 20	= 480	= 31.1035
		1	= 24	= 1.5552
			1	= 0.0648

The U. S. Government at the mints, etc., divides the troy ounce decimally into tenths, hundredths, thousandths, etc.

APOTHECARY.

20 grains	= 1 scruple	= 20 grains.
3 scruples	= 1 dram	= 60 "
8 drams	= 1 ounce	= 480 "
12 ounces	= 1 pound	= 5760 "

lb.	oz.	dr.	scruple	grain	gramme
1	= 12	= 96	= 288	= 5760	= 373.2419
	1	= 8	= 24	= 480	= 31.1035
		1	= 3	= 60	= 3.8879
			1	= 20	= 1.2960

METRIC.

The gramme of the metric system is divided decimally into deci, centi, and milli-grammes and multiplied into deka, hecto, and kilogrammes. The kilogramme of 1,000 grammes is the unit for weighing heavy articles.

lb. av.	oz. av.	grains	gramme
0.0022	= 0.03527	= 15.4328	= 1.
yard	feet	inch	metre
1	= 3	= 36	= 0.91438
	1	= 12	= 0.30480
		1	= 0.02540
		39.3708	= 1.00000

It would be of great advantage or of increased convenience if the pound avoirdupois were divided into tenths and hundredths rather than into sixteenths, etc. Troy weight is used for weighing silver and gold bullion only, and usually the ounce is the denomination used, as "400 ounces of gold," "5,000 ounces of silver, etc." It would be vastly to the advantage of the American as well as of the British people to discard the troy ounce altogether and have governmental and other pur-

chases of gold and silver given in avoirdupois pounds, divided decimally into tenths, hundredths, etc., as it would tend to harmonize matters and to familiarize the people with the proportions by weight between the quantities of gold and silver and other articles of merchandise.

Apothecaries weight is used in putting up prescriptions, though the metric system is also sometimes used.

THE DOLLAR WEIGHT

Is used to weigh the money of the U. S., and is, therefore, the U. S. money weight or monetary unit or money unit. It is divided into halves, quarters, tenths or dimes, hundredths or cents, and thousandths or mills.

The dollar is a unit weight (25.8 grs.) of U. S. money, and its value is a unit value for the purpose of valuing U. S. value or "wealth," and is called a dollar's worth, or the value of a dollar, or sometimes simply "dollar" or "dollars," as, for instance, "the loss was a dollar," or the loss in property was 5,000 dollars; as, for instance, when Chicago went up in flames, the loss was so many millions of dollars, although the loss of gold in the debris or otherwise was comparatively inconsiderable. The loss in fact was the amount of labor required to buy enough dollars to replace Chicago. The U. S. gold dollar is .900 fine, containing 23.22 grains of pure gold and 2.58 grains of pure copper; 387 troy ounces of pure gold with 43 ounces of copper make \$8,000 at the U. S. mint.

There are in an avoirdupois pound of U. S. gold 271.3178 76-258 dollars, and in a ton there are 542,635.65 230-258 dollars.

THE SILVER DOLLAR WEIGHT

Is not used in trade further than that it is the uniform weight at which the silver dollar tokens for a gold dollar are minted; it is 412.5 grains; they are nine-tenths silver, containing 371.25 grains pure silver, the rest copper. Also among the vagaries of the U. S. treasury is one which sometimes reports the silver bullion on hand as so many "dollars" "coinage value," meaning so much bullion as will make so many silver dollars. This only puzzles the well-beloved common people, and it would be better that it were inventoried in troy ounces or in avoirdupois pounds at so much per ounce or pound according to its value in U. S. money, as an asset of the treasury of the United States.

THE ASSAY TON.

The assay ton is a weight of $29,166\frac{2}{3}$ milligrammes used by assayers for assaying gold and silver ores.

There are 29,166 $\frac{2}{3}$ troy ounces in a ton of 2,000 pounds avoirdupois. Now if the assayer having a sample of a lot of ore well taken, mixed, and powdered, takes from it 1 "assay ton" and finds that it contains 1 milligramme of gold, he says that the ore "goes" one ounce in gold to the ton, and so with silver. Each milligramme of precious metal that he finds in an "assay ton" means the proportion of 1 ounce to the ton. If the assayer should take a 1-2 assay ton (which he often does) and multiply the weight of precious metal extracted by 2, the result would be the same, and similarly with tenths, etc. Assay ton weights are bought, like gramme weights, etc., at supply houses, and they

usually come in convenient sets, appropriately subdivided, etc.

This system of weights, which is a great convenience, was devised by Professor Chandler, of Columbia College.

A troy ounce of American money is worth as many dollars as 480 will contain 25.8, which is 18.60 120-258.

A U. S. gold dollar contains 23.22 grains of pure gold. Divide 480 by 23.22, and it will give the number of gold dollars that will contain the gold of a troy ounce of pure gold, which is 20.67183; therefore, this is said to be the value in dollars of a troy ounce of pure gold, no account being taken of copper or of labor; but the U. S. coins gold free of charge, and of course furnishes the copper free; so also practically does England. Pure gold is worth \$20.67 per troy ounce, which is the credit given at the U. S. mint.

14 7-12 ounces troy is 1 pound avoirdupois; so, multiplying troy ounces by this number, converts the weight into pounds avoirdupois.

The pound troy is to the pound avoirdupois as 5,760 is to 7,000, or as 144 is to 175. The ounce troy is to the ounce avoirdupois as 192 is to 175.

The specific gravity of cast pure gold is 19.258, and the weight of a cubic foot of water is 62.355 pounds, which gives 1,200.83259 pounds as the weight of a cubic foot of gold; therefore, 1 3-4 cubic feet of pure gold weigh a ton very nearly.

Avoirdupois, French *avoir du pois*, from old French *avoirs de pois*, i. e., things that sell by weight (and not by measurement), commodities of weight, from *avoir* to have, Latin *habeo*, and French *poid*, a weight or load.

Old French *pois poix*, from Latin *pensum*, anything weighed, a weight. The d of *poids* was introduced erroneously into *poids* because it was thought the word came directly from the Latin *pondus*, meaning a weight. (Webster.)

Avoir in French means to have, and also means property, belongings, possessions, goods, and is of the same strain as the English verb to have, indicating possession, and the Spanish verb *haber*, indicating the same, and also meaning belongings, also with the German *haben*, Latin *habere*, etc.

Naturally, there are a host of relatives in many languages, such as habit, habiliment, ability, Spanish *habilidad*, Latin *habilitas*, able, Latin *habilis*, Spanish *habil*, happen (to have referring to time), happy (as is one in the possession of what he desires). Happ is Icelandic for unexpected good luck. Heavy means about the same as have-y (that is, having much weight).

Haven, a safe place, where one is protected from harm, or safely had or held, heaven a haven of happiness, etc., etc.

Troy, named after a weight used at the fair of Troyes, a town in France, southeast of Paris. The troy ounce is supposed to have been brought from Cairo during the crusades, and adopted in Troyes, from whence it spread.

CHAPTER XL

Older Money, Coins, Trade, and Industry.

Two things absolutely essential in money are weight and value, but as every substance with which we are acquainted has weight, therefore the one absolutely essential thing to find in a money is value; for the value of any quantity of anything having no value would be zero, and could in nowise serve as a measure of value any more than any quantity of anything having no weight could serve as a standard of weight.

But there are many attributes that are convenient to have in money which reduce the substances that satisfactorily fulfil these conditions to very few, and it will be noticed that these attributes cluster about the word accountability.

Anything not worth accounting is "of no account." A money should be something definite, preservable, and deliverable, is better solid than liquid, should be homogeneous, not brittle or friable, a stable substance, not likely to change by corroding or oxidizing or burning up or dissolving, should be capable of being well marked or certified to, and should be easily recognizable. This last property is possessed by every metal, and all these desirable qualities are possessed in a high degree by gold, silver, nickel, and copper, but especially so by silver and gold, and for various reasons most

especially so by silver; for it is especially expedient that the industrious world should demand the abandonment of gold money; but this is due, not so much on account of fault to be found with the metal of itself as a money metal so much as of the fact that public policy or true political or public economy demands that the value of gold should be unsparingly broken. From what has already been said on the subject of money and value it is plain that almost as soon as men could weigh accurately and became industrious and commercially inclined they would get an idea of money.

The invention of the balance or steelyards and the adoption of any standard weight would surely be succeeded at small length of time by the idea of money, or the notion of comparative prices or relative value, which would enter a man's head even when he was a very rude accountant. With the invention of letters and the introduction of Arabic or decimal notation these things moved very rapidly. There is much that tends to show that the first money used by man was common salt. In fact, the mind can see at a glance that the first great step taken by man was the invention of fire; the second was the invention of pottery; third, salt making; fourth, manufacture of metals, copper, and tin, which, alloyed, form bronze and then iron.

The bronze age overlapped the iron age, and only went out when ironworking had acquired very respectable perfection and as steel and wrought iron came in. There is no clear line of demarcation, but it often happened in old times of little communication that different people were at the same time in very greatly different stages of civilization. The same is true now, but in far

less degree, and not at all true as regards all the advanced nations of the earth, for any discovery is quickly disseminated among the progressive people of the world.

Salt currency was in use in Africa in the sixth century, and still is used thus in some parts of Abyssinia.

Marco Polo wrote that salt was a common medium of exchange among certain Asiatic people in the thirteenth century. In Tibet pieces of salt shaped in a mould and weighing about 1-2 a pound each served as small exchange, eighty such pieces having a value equal to about \$3.00. The Thracians of old, bartered slaves for salt. Felix Dubois, in his "Timbuctoo, the Mysterious," comments on the varieties of salt in the interior of the Soudan, and says it is the most valuable commodity of that region, the true gold of the Soudanese. The Indians of South and Central America frequently barter with salt in the market places or *plazas*, sometimes using measures of it as a species of small change in petty transactions. Evil spirits can not bear the presence of salt, and there is an immensity of folk lore or old tradition connected with salt, in all of which salt acts the beneficent or propitious part.

Scotch fishermen salt their nets "for luck;" 3 grains of salt in a milk pot will keep witches away, according to the peasants of the Hartz Mountains.

In Bohemia a mother protects her daughter from the evil eye by putting a little bread and salt in her pocket, and sprinkles salt on the ground that she may not lose her way. It is unlucky to spill salt, but this bad luck may be averted by throwing some of the same salt over the shoulder.

There is philological evidence that salt anciently was money; for instance, *salarium* is the old Roman word for wages, the same as our word "salary."

To say that a man "is not worth his salt" is probably taken from very ancient times, meaning that he was not worth his salary, rather than not worth the salt he might consume. The "salt of the earth" probably means, by a figure of speech, the most precious thing of the earth, the good people of the earth, the industrious world. "But if the salt have lost his savor, wherewithal shall it be salted;" but if these entirely lose their intelligence or their virtue, how shall it be returned to them, or from where may it be derived anew?

It may be that to sell a thing is to get salt for it; sale is the corresponding noun. To salute a man is to ask after his health, or perhaps after his value or wealth, or perhaps after his weal or welfare, which would include all things favorable to him. There is a kinship between the words well, weal, wealth, welfare, value, feelings, etc. As might be expected, the word for salt is similar in many languages; Anglo Saxon, *sealt*; Dutch, *zout*; Icelandic, Danish, Swedish, and Gothic, *salt*; German, *salz*; French, *sel*; Italian, *sale*; Spanish, *sal*; Russian, *sole*; Latin, *sal*; Welch, *hale*, *halen*; Greek, *hals*; Sanskrit, *sara*; Irish and Gaelic, *salann*.

The Arabic word *salam* means peace, safety, also a salutation, also a low bow in token of obeisance. To eat salt with an Arab is supposed to insure hospitable protection.

Hebrew, *shalam*, peace; *shalam*, to be safe; *shiloh*, rest, peace. "The scepter shall not depart from Judah nor a lawgiver from under his feet until Shiloh come,

and unto Him shall the gathering of the people be."

There are an immense number of related salt words, such as sauce, salad, sausage, souse, saline, salute, solution, save, salve, solve, hale, holy. As metals came into more general knowledge, the salt salary was replaced by a bronze salary, less destructible, more accountable, and more convenient.

The first Roman coin of bronze was called a solidus, meaning entire or whole, as it was originally made for paying to soldiers, and, as it is said, called thus because a soldier's salary for a certain time came in a solid chunk, whereas it is possible that this contradistinguished it from the salt salary, that was broken up or granular, and could not be marked or impressed with its own weight. It also came to be used for the purpose of paying other public employees, and the word solidarium came to mean the same thing as stipend, or salary of servants, or as the word salarium. From this probably comes the old English word solde, meaning wages, same as the Spanish *sueldo* and Italian *soldo*, meaning wages, may have come into England during the Roman occupation; there is also an Italian word *soldo*, the hundredth lira. *Soldonniere*, French, is one taken in pay, a stipendiary.

In Italian *soldato* is soldier, and *soldare*, to keep soldiers in pay, to enlist, to recruit; *soldarius* (Latin) is soldier, literally, one having pay, a salaried man, a hireling, from *soldus soldum* (corrupted from *solidus solidum*), meaning pay. The true original Latin word for soldier is miles, militis. It may be that originally mercenaries or paid soldiers were called thus to distinguish them from creoles or patriots or natives of the country or *patria* or fatherland who received no pay or

who were obliged to render some gratuitous service.

In Spanish to this day the word *patriota* carries the idea of one who serves the public without pay or *patrioticamente*. In Spanish and Portuguese, soldier is *soldado*; in French, *soldat*; German, *zoldat*.

In old French, *solder* means pay, and we use about the same metal to braise with or as a very hard solder.

It may be that the English word sold is from the same source and was not originally the past form of sell (to get salt for), and that the verb to sell is a compound verb like the verb to be. However, it seems to be analogous with tell, tale, told. However, the etymology of these and kindred and other relevant words is not quite clear and furnishes a subject for a good thesis by a member of the class '01.

Of the seven ancient metals, Silver, Gold, Copper, Lead, Tin, Quicksilver, and Iron, all have been used for money except quicksilver, which was too mercurial, elusive, evasive, cursive.

Among these is iron, and we think the word earn or to earn is derived from the word iron or from the word formerly used for iron. The Icelandic for iron is *jarn*; the Danish and Swedish, *jern*; the Irish, *iarran*, *earran*, *iarun*; Welsh, *haiarn*.

We do not believe in the etymology that would derive the word earn or to earn from the Anglo Saxon *earnian*, old German *arnen* and *arnon*, and modern German *ernten*, meaning to reap, although probably the sign of the idea to reap comes from putting an iron into the crop and was nearly the same as to iron it. German words *arin*, *aren*, *arn*, and modern German *ernte* mean a harvest, to which derivation the word earn is

usually traced in accepted dictionaries. We are a believer in what may be called the Darwinian theory of language, and that ideas must spring up before words, and that little or no reaping was done by our lingual ancestors until after the use of iron became comparatively common and there were many ways of earning besides reaping or harvesting, especially among woodsmen, fishermen, hunters, and herdsmen.

We believe that iron was at first very valuable, and might have been used for money, or to pay wages with, and a very useful thing in the manufacture of a hunter's weapons. An axe and especially a knife is almost indispensable in any family. To earn anything was to iron it, to exchange it for iron, whether it were labor or some commodity, and was about the same as to sell it or get salt for it. It was to get something permanently valuable.

In Scotland, as well as in many places in England and Ireland, the common word for earn is the same as that for iron.

"Coffins stood round like open presses,
That shawed the dead in their last dresses,
And by some devilish cantrip sleight,
Each in his cauld hand held a light,
By which heroic Tam was able
To note, upon the haly table,
A murd'rer's banes in gibbet *airns*,
Twa, span long, wee unchristened bairns."

("Tam O'Shanter," Burns.)

To earn may be to hire-n and iron hire-n.

The use of Money is very ancient, and far precedes any system of perfect coinage, and the idea of money was extant long before the dawn of history.

An ancient and much quoted mention of money is made in the twenty-third chapter of Genesis, given the date 1860 B. C., when in a very thoroughly solemnized real estate transaction Abraham bought the field of the Cave of Machpelah from Ephron the Hittite for 400 shekels of silver, "current money with the merchant," meaning current money among merchants, meaning also possibly standard money, acceptable money, money up to the mark.

A shekel is 224 grains. Joseph was sold by his brethren for 20 pieces of silver.

His brethren took money with them with which to buy corn in Egypt.

This silver may possibly have come from Spain. The process of lead smelting was known in exceedingly ancient times and carried on as in the Mexican adobe furnaces. In times as ancient the purification of silver and gold by "cupellation" was effected substantially as it is now. In this operation the precious metals are fused with lead in a current of hot air and upon a bed of bone-ash. The molten oxide of lead (litharge) subsiding into the bone-ash drags the intermixed impurities with it, leaving the precious metals free of impurity. "Tried by fire," "proved by fire," the "trial of fire" are ancient expressions referring to this practise. A man "tried by fire" meant one fully to be relied upon, that is, utterly genuine or pure, and it may be that the expression "baptize with fire" used in the New Testament, refers to the same idea, and would mean to purify, as precious metals are purified by this baptism of fire. Matthew 3:11; Mark 1:8; Luke 3:16; John 1:33.

"Behold I have refined thee, but not for silver, I have

chosen thee in the furnace of affliction." Isaiah 48:10. See Zechariah 13:9; Malachi 3:2; Psalms 12:6; Isaiah 1:22.

They are all grievous revolters walking with slanders. They are brass and iron; they are all corrupters.

"The bellows are burned, the lead is consumed of the fire, the founder melteth in vain; for the wicked are not plucked away. The refuse from silver shall men call them, for the Lord hath rejected them." Jeremiah 6:29.

"As they gather silver and brass and iron and lead and tin into the midst of the furnace to blow the fire upon it to melt it, so will I gather you in mine anger and in my fury, and I will leave you there and melt you." Ezekiel 22, verses 18 to 24, also 26 to 29.

So much for this process of refining; it shows that the ancients were well acquainted with it.

Isaiah wrote about 750 B. C., Ezekiel about 600. Something was known about mining, see Job, chapter 28. Surely there is a vein for silver and a place for gold where they fine it (refine, purify, separate, segregate it). The date ascribed to Job is about 1250 B. C. In the spoil of the Midianites six metals are mentioned; the one lacking of the seven metals of the ancients is quicksilver (brass is supposed to mean copper). Numbers 23, verses 22, 23, 50, 51, 52, 54, etc. In 2 Kings, chapter 7, there is something about prices. In 2 Kings, chapter 12, is an interesting account of the building of a house or temple, and mention is here first made of a regular contribution box. "And it was so that when they saw that there was much money in the chest, that the king's scribe and the high priest came up,

and they bound up the bags, and told the money that was found in the house of the Lord; and they laid it out to the carpenters and builders that wrought upon the house of the Lord. And to masons and to hewers of stone and to buy timber and hewed stone to repair the breaches of the house of the Lord, and for all that was laid out for the house to repair it. Howbeit, there were not made for the house of the Lord bowls of silver, snuffers, basins, trumpets, any vessels of gold or vessels of silver of the money that was brought into the house of the Lord. But they gave that to the workmen, and repaired therewith the house of the Lord." This was about 878 years before Christ. The invention of coinage dates from about 700 B. C.

So here we have a well-ordered and important piece of work going on, and the wages of men paid in gold and silver, long before the invention of coinage. It would have been fortunate had the ratio been given in this concurrent circulation.

We subjoin the following, taken mainly from the Oxford Teachers' Bible.

Jewish weights and money.

1. *Weights.* The invention of coining, that is, the practise of stamping pieces of gold and silver for the purpose of currency, dates from about B. C. 700.

This innovation, which to a great extent succeeded the use of the balance, originated in Lydia. From Asia Minor it spread into Greece, but it had not penetrated into Syria before the Babylonian conquest of Judah, about 600 B. C. After the return from the captivity, 536 B. C., there is still no evidence that the Jews possessed any native currency until the time of Simon Mac-

cabaeus, who freed them from the foreign yoke, B. C. 141.

Wherever mention is made of money before this date in the Old Testament, either bullion money or the coinage of the Persians or Syrians is to be understood. The precious metals had, however, always been used from the earliest times in the shape of bars, ingots, or rings, which were weighed in the balance according to a system of weight which the Jews had adopted with modifications from the Phoenicians and Assyrians. The principal weights in use for numerous objects, especially the metals, were the following:—

Gerah	=	$\frac{1}{8}$	shekel	=	11.2	grains
Rebah	=	$\frac{1}{4}$	"	=	56	"
Bekah	=	$\frac{1}{2}$	"	=	112	"
Shekel	=	1	"	=	224	"
Maneh or mina	=	50	"	=	11239	"
Kikkar or talent	=	60	maneh	=	674392	"

The talent is 96 avoirdupois pounds and 2,392 grains, or about 96.34 avoirdupois pounds.

It is 1,404 troy ounces and 472 grains, or lacks 8 grains of being 1,405 troy ounces.

A shekel, 224 grains, is exactly 7-15 of a troy ounce, or 15 shekels make 7 troy ounces.

Silver is quoted now—1900—at about 60 cents per ounce troy, so that a shekel of silver would be worth now about 28 cents. The purchasing power was for ordinary commodities much greater in those times than now, and also it bought much more labor than it would now, at least in the United States, on the average. In addition to the above there was a special talent and maneh used only for gold based upon a gold shekel of 253 grains. The gold shekel was tarified at 15 shekels

of 224 grains or 253 grains of gold at 3,360 grains of silver, which would indicate a ratio of about 13.2. The gold shekel was about 2 pounds sterling, or \$9.60, reckoned as pure gold 23.22 grains to the dollar (of course this count is short the copper, and the American dollar is not 23.22 grains of gold, as is so often erroneously stated, but it is nothing less nor more than exactly 25.8 grains of the gold coin, or money of the United States).

In the above table the shekel signifying "weight" is the unit, of which the rest are multiples and submultiples (fractions). The word *gerah* means a grain or bean; *rebah*, quarter; *bekah*, half; *maneh*, part (in the authorized version "pound"); *kikkar*, circle, globe, or disk. Hebrew names of weights are not found in the New Testament, though the Greek word *mna* (Luke 19:13) is doubtless identical with the Hebrew *maneh*.

(Note.—There is some mistake somewhere in the above, for 50 times 224 is 11,200 instead of 11,239, and 60 times 11,239 is 674,340, instead of 674,392.)

2. Coins.

The earliest struck coins as distinguished from the more ancient bullion money mentioned in the Bible are the *Adarkon* and the *Darkemon* A. V. "Drams" (Ezra 8:27, Nehemiah 7:72), which are doubtless the Persian gold Darics first issued in the reign of Darius Hystaspes, B. C. 521-485.

The Darics were the standard gold currency down to the time of Alexander the Great, and they circulated throughout the East. The obverse of the coin bears an impress of the Persian monarch kneeling, holding a bow in his left hand and a spear in the right.

The Daric weighed 130 grains or about \$5.28 gold. After the Macedonian conquest and the subsequent partitioning of Alexander's empire, the Jews while tributary to the Ptolemies and Seleucidae made use of the coins of Egypt and the Phoenician ports, tetradrachms, didrachms, and drachms (2 Macc. 14-19), equivalent to the shekel, $\frac{1}{2}$ shekel, and $\frac{1}{4}$ shekel.

The earliest native Jewish coins are shekels and half shekels of silver and sixth shekels of bronze, attributed to Simon Maccabaeus, to whom special authority was granted by Antiochus VII (Sidetes) B. C. 141, to coin money with his own stamp.

"I give thee leave to coin money for the country with thine own stamp." (1 Macc. 15:6.)

The shekel, which was of the ancient Jewish weight, 224 grains, has on the obverse a cup or chalice, with the inscription (shekel of Israel) in the old Hebrew characters, and the Hebrew numerals, 1-5, referring to the official years of Simon's rule, corresponding to B. C. 141-137. On the reverse is a triple lily, or according to some, the budding rod of Aaron (Numbers 17:8), with the legend (Holy Jerusalem) in Hebrew characters. The succeeding princes of the Maccabaeen or Asmonaeen family down to B. C. 37, struck only small bronze coins with Hebrew or bilingual (Hebrew and Greek) characters.

The Idumaeen or Herodian princes, B. C. 37 to A. D. 100, Herod the Great and his successors, also coined bronze money bearing their names in the Greek character. The bronze coin of Herod Agrippa I, A. D. 37-44, has on the obverse the inscription (King Agrippa) around an umbrella, and on the reverse the date, L. S. (year 6) and three ears of corn.

The large bronze coin of Agrippa 2nd, A. D. 48-100, bears on the obverse the head of the Emperor Vespasian, and on the reverse the standing figure of Fortune holding a Cornucopia. Meantime the Roman Procurators of Judea, who from B. C. 6 governed the country during the almost nominal reigns of the later Idumæan kings, also struck bronze coins with Greek inscriptions.

These do not bear the names of the Greek procurators, but only those of the emperors and the years of their reigns. Those of Tiberius with the date 18 were struck in the year of the crucifixion. The silver coins current throughout this period were Greek tetradrachms of Antioch, etc., and Roman denarii. The denarius of Tiberius weighed 60 grains (with silver worth 60 cents per ounce would be worth now in the United States $\frac{1}{3}$ of 60 cents or $7\frac{1}{2}$ cents).

The denarius, A. V. "penny," was the usual day wages of the field laborer. The thirty pieces of silver, the price of Christ's betrayal, were probably not denarii but tetradrachms.

The following are the principal coins current in Palestine, during New Testament times.

Silver.

Stater, A. V. "piece of money." Matt. 17:27. A tetradrachm of Antioch, weight 236 to 220 grains, equivalent or about that of a Jewish shekel, but officially tariffed at 3 Roman denarii, or $\frac{3}{8}$ of a troy ounce, reckoned as pure silver, but of course there must have been alloy. The piece would be somewhat larger than an American half dollar. Argurion, A. V. "piece of money," Matt. 26:15, was another name for the same coins.

Didrachmon, A. V. "tribute money," Matt. 17-24, 2

drachms of Antioch, about 112 grains, equivalent to a Jewish half shekel. Drachme, A. V. "piece of silver," Luke 15:8, a drachm of Antioch equivalent to a Roman denarius (this does not quite harmonize with a former statement of 3 Roman denarii to the tetradrachm of Antioch). Denarius or denarion, A. V. "penny," Matt. 18:28, etc., the Roman imperial denarius of 60 grains troy.

Bronze.

Assarion, A. V. "farthing," Matt. 10:29, the Roman As or 1-16 of a denarius.

Kodrantes, A. V. "farthing," Matt. 5:26, 1-4 of an Assarion.

Lepton, A. V. "mite," Mark 12:42, the smallest Jewish bronze coin, equivalent to half the kodrantes or 1-4 farthing. (A. V. stands for "Authorized Version.")

During the revolt of the Jews, A. D. 66-70, the issue of Jewish silver was revived and shekels and 1-4 shekels of silver were once more struck in the names of Eleazer and Simon.

On the conquest of Jerusalem, A. D. 70, the Roman emperors Vespasian and Titus struck coins in Rome and Judea bearing the inscription, *Judaea Capta*, *Judaea Devicta*, and in Greek letters (*Judaea conquered*). Once more during the second revolt under Simon Barcochab, A. D. 132-135, the Jews struck native shekels and 1-4 shekels bearing the Hebrew inscription (*The deliverance of Israel*). The series of the coins of Jerusalem closes with those of the Roman Aelia Capitolina after the rebuilding of the city by Hadrian, A. D. 136, when the new temple of Jupiter Capitolinus replaced that of Jehovah.

Though there is uncertainty about some of the weights given above yet they throw light on a few important passages. Thus Joseph was sold by his brethren for 20 pieces of silver, presumably shekels, and therefore 4,480 grains, or 18-27 of an avoirdupois pound, or 9 1-3 troy ounces.

Naaman's offer to Elisha, 2 Kings, chapter 5, of 6,000 pieces (shekels) of gold was equivalent to something like (shekel gold 253 grains) 1,518,000 grains, or 3,162 troy ounces. A troy ounce of pure gold is worth \$20.67; counted at \$20 per ounce, would be \$63,250, or if the shekel of 224 grains were used, would be \$56,000. The temple tax at Jerusalem, Matt. 17:24, was a didrachm of silver or 112 grains, a little less than a fourth of a troy ounce. Our Lord told St. Peter that in the fish's mouth he would find a stater, Matt. 17:27, a tetradrachm or stater equal to a Jewish shekel, 224 grains or 7-15 of a troy ounce of silver, a coin something larger than a silver half dollar piece, which would pay for the apostle and his Master.

The debtor who had been forgiven ten thousand talents or about 1,450,000 ounces troy of silver refused to forgive his fellow-servant 6,000 grains or 12½ ounces troy.

The householder, in the parable, is represented as hiring laborers for his vineyard at a penny a day, or 60 grains or 1-8 of an ounce of silver. Judas sold Christ for 30 pieces of silver, argurions or tetradrachms, Matt. 26:15, equivalent to 30 shekels or 14 ounces troy, or 8-9 of a pound avoirdupois, being 6,720 grains; if we give the weight of 3 denarii or 180 grains to this "piece" it will be 5,400 grains or 11 1-4 troy ounces

or 27-35 of a pound avoirdupois. Fourteen ounces troy of silver at the present price, about 60 cents U. S. gold per ounce, is worth now about \$8.40.

In Joshua, 1451 B. C., Achan covets a goodly Babylonish garment. "And when I saw among the spoils a goodly Babylonish garment and 200 shekels of silver and a wedge of gold of 50 shekels weight, then I coveted them and took them and, behold, they are hid in the earth in the midst of my tent and the silver under it."

Babylon, a city of merchants, Ezekiel 17:4, B. C. 594. Nineveh, with numerous merchants, Nahum 3:16, B. C. 713.

Chaldeans, and the ships of, Isaiah 43:14, B. C. 712. Commerce of Tyre, Ezekiel, chapter 27, especially interesting and particularly worthy of perusal on account of the very large list of articles of merchandise, and description of the wonderfully large and varied trade of a great maritime city of 2,500 years ago.

CHAPTER XII.

Bimetallism.

"Bimetallism may be defined as the free coinage of both gold and silver at the relative value set by legislative enactment, or as the union of these two metals as full money, at a fixed rate and specifically as that system of coinage which recognizes both coins of silver and coins of gold as legal tender to any amount, or the free coinage and concurrent use of the two metals as a circulating medium at a fixed relative value." (Encyclopedia of Social Reform, by D. P. Bliss.)

The final report of the English Royal Commission on gold and silver, reporting in 1888, described bimetallism as follows:—

"A bimetallic system of currency must, in view of those who advocate it, include two essential features: (a) an open mint, ready to coin any quantity of gold or silver which may be brought to it; (b) the right, on the part of the debtor, to discharge his liabilities at his option in either of the two metals at a rate fixed by law."

For my part, it seems that if "bimetallism" is a good thing, why not trimetallism or quadrimetallism or polymetallism. If it is a good thing for government to try to fix the ratio or price between two commodities on account of an attempt at "stability," why not between many? By the same reasoning it would be a good

thing if all prices were frozen at one market report and should stand like so many mummies awaiting the general awakening, or that the government set about to "regulate commerce" to a set of unchangeable or set prices, something it could not do if it would, nor is it so insensate as to try, nor is there any sensible or truly logical reason why this rule should be changed with reference to gold and silver only.

The bimetallists of the U. S. have been accused of dishonesty by their opponents (and to my mind with reason) inasmuch as they would make the practise of their theory retroactive, and debts contracted in dollars since 1873 (which are gold dollars) they would pay with silver, worth half as much. The bimetallists contend that the law of 1873 increased tremendously, they say "doubled" (but in reality it was infinitely more) the burden of indebtedness, which is undoubtedly true, but this law if unjust was at least accepted without legal protest, from the legal tender Supreme Court of the U. S. That pompous aggregation of dignity, which has degenerated, as many of us believe, into a bulwark of monopolism, a high court of Mammon, having, as many of us also believe, no care for workingmen or the rights of Labor or the rights of Man, did not discover that it was *prima facie* an open indubitable and palpable violation of the intent of the clause regarding the "obligation of contracts," and therefore utterly and instantly unconstitutional, being a scheme to plunder the public for the benefit of usurers, opposed to public policy and to public morals, and if this is not enough, it was also a high-handed violation of the *ex post facto* clause; and all this not to favor the beloved boys either in blue

or in gray, the choice of the land, whose warrior breasts were bared to fierce steel and murderous shot and shell, and whose health sank often even to death under miasma, exposure, fever, and hardship.

Nor was it done for the rest of the industrious people of the U. S. both men and women, who in anguish, without relaxation, strained every nerve to sustain the desperate conflict to the bitter end, and who had settled down in fidelity and in peace to repair the dreadful loss as far as it could be done and to bridge the bloody chasm, but it was done for the vultures who gorged upon the result of martial horror, for the harpies who fed and fattened while they defiled.

In these United States it is by some accounted treason publicly to denounce this superb body of men whom we have adequately remunerated, whom we have amply guarded against any sudden violent or mistaken popular clamor, whose health, calmness, ease of mind, and secular future, we have zealously protected, whom we have given easy access to every procurable information and supposed to be capable of high discriminative and humane judgment, whom we therefore have set apart as superior guides, sitting in safety and in grandeur, surrounded by comfort, luxury, and opulence, princes not only of American but of mundane society.

Have we not a right to complain of these men who were in large measure responsible for so much unnecessary perspiration, fatigue, backache, heartache, lost time, and hopeless endeavor; and whose duty it is to forestall any serious legal assault upon public right?

Regretfully we say that they have broken the divin-

ity that hedges in meritorious majesty, and they have torn our ideal from its high place, for in our ignorance we had believed and hoped that this exalted tribunal was beyond doubt or censure.

In our trustfulness we placed them upon the outer wall, and they have, without outcry (perhaps unwittingly, but they are supposed to be wise), allowed us to be betrayed into the hands of the enemy of mankind, and have helped, if not in the forging of our chains, at least in the riveting of our shackles. The popular cry that this holy big medicine band is under grand taboo and should not be criticized, is what our English friends would call the merest "rot." You will find in attacks upon wrong and monopoly, that reason is called treason by the Pharisees of government.

We have shown that "the finest" and "the only" will bear watching, and that we can not sleep in the idea that we are a "free people" or that this monopoly-ridden republic is a "free country," or can be kept so by any such instrument as an unscrutinized Supreme Court, which, as we have shown, may be most lamentably maculate and fallible, indeed eternal vigilance is the price of progress, and our lamps must be kept burning, that we do not sink like Egypt and Rome under the weakness of precedent or the weight of special privilege and debt.

To my mind, highway robbery is far less a crime than "confidence" working, and I think it would be better to advocate plain, simple, easily understood, general repudiation, than to advocate retroactive bimetalism, for it is far better for the human race that the Labor of the world should at once repudiate all the

debts of the world than that mankind should sink under the burden of indebtedness, and it is direct and far easier than claiming equity of a conspiracy (the gold trust) that does not know the word.

• The bimetallists in their arguments have the advantage over the monometallists of a humane spirit, and also that they recognize that a great wrong has been done and is being done to the country and to the world by the gold standard.

They have the disadvantage of claiming as facts certain things that are illogical or unreasonable.

Among these are that we could have a double standard at any one time, or that there can, in fact, be any such thing as a continuous double standard or two standards, the very word *standard* precludes the idea. (Under the system that we have proposed, however, it would be possible to have a gold standard or gold money unit in one part of the country and a silver one in another, for the government would take no responsibility in regard to the ratio or price.)

Under what is called "bimetallism," the cheaper quantity of metal will certainly be used as the money unit, so it is really monometallism of the cheaper alternative or cheaper quantity of metal, and is practically what it has been called, viz., an alternative standard. It is a two-option standard, or the standard of the cheaper alternative. Men trading and making accounts will certainly do business in the money in which balances will be paid, and they will keep on the safe side and take the cheaper. If it takes less than 16 ounces of silver to buy an ounce of gold, then gold is the money; if it takes more, then silver will be the money.

Men owing debts will certainly use the cheaper quantity of metal, and men have been protected by government in swindling, in fact, in the early stages of the war, just after the legal tender law was passed, men who had deposited gold in banks and otherwise were forced to take depreciated paper, dollar for dollar. Men have been swindled out of hundreds and hundreds of thousands of dollars by tricky banks and individuals assisted by that great patron of thieves, the United States Government, at least when it is ignorantly or criminally administered.

From 1792 to 1834, we had a silver standard in the United States. From 1834 (the date of the first change in the ratio) to 1873, we had the gold standard, according to that clumsy "law" of Gresham, which gold monometallists so delight to mouthe, the "bad money" (gold) "drove out" the "good money" (silver), or commodities hunt the best market, or trade seeks its level.

If we had 16 to 1 bimetallism in this country, we would go instantly to a silver basis, which, were this not retroactive as regards the payment of gold or dollar of '73 obligations, would be a consummation devotedly to be desired. It is to my mind an unfortunate fact that the "silver" or anti-gold men of the United States did not take up this stand from the beginning. Silver advocates most unfortunately frequently deny that gold would be taken off the market at 16 to 1, or that gold dollars could not be gotten at that price. Gold certainly would be taken off the market at that price as more can be gotten for it in the markets of the world. The monetization of silver would enhance its price as compared to gold and have a tendency to bring them nearer in price.

Gold would not be "driven from the country" as gold men assert, for it can always be bought at some ratio, as it always has been and always will be, which will be the market ratio.

It is not so holy that it can not be bought. It is bought now, always has been, and always will be, and, like any other commodity, its owner will sell it in the best market. Of course, the demand for it in the United States would weaken as it would not be used for the great use of hiring labor, and some of it would go somewhere else to cause good times by throwing gold galore on the market, which would be a great thing, and continue were it not caught up with again by the making of new indebtedness. So, after all, the great enemy of the working world is the debt system, or collection and mortgage laws.

The so-called ratio of 16 to 1 has never existed in the United States. The ratio between the weight of the token silver dollar and the true dollar of the United States is exactly 15 85-86 to 1, or about 15,988 to 1. Divide 412.5 by 25.8 or 371.25 by 23.22.

The relative cheapness of mining is a matter really of no moment in true monetary argument. In this regard, however, larger values of gold have probably been extracted by smaller outlays than has ever been the case with silver.

The value placed by silver men upon silver, viz., \$1.29 gold per ounce, is because 1 ounce troy of 480 grains of silver is used in making one silver dollar and 29-99 of a dollar, which would be \$1.29 nearly. Divide 480 by 371.25, the number of pure grains of silver in a silver dollar.

Nothing was ever heard of the contention for this price from silver mine owners until some little time after the cataclysm of 1873, for the silver owners had been disposing of their silver principally in the Chinese market at a better price than \$1.29 gold per ounce, and at that time there was no demand for \$1.29 gold per silver ounce, made on the American Government by patriotic American owners of silver.

Silver men say that silver was "struck down" by demonetization but the truth is much worse. Industry received a dreadful and murderous stab, which will be fatal unless she changes her mode of treatment, discharges her gold physicians, abandons the gold standard, and pays up her debts, principal and interest, to the uttermost farthing. This interest represents a taxation of the world to the detriment of the welfare of mankind, and for the benefit of the "money power," and is protected by every bulwark of law that Cunning and Greed could possibly devise, many sorts of civil court and multitudinous processes and methods, all at the public expense and for the benefit of the industry of usury, and no political economist in any chair in any great college in the United States or in the world *dare* attack the system, for he would lose his place almost instantly. In the United States they are "churched" and "fired" for much smaller sacrilege.

CHAPTER XIII.

Gold Monometallism.

"This view teaches that, at least in the present stage of civilization, the only money that should be used as primary money, and, therefore, as the standard value, should be gold. Other metals, like silver, copper, etc., may be advantageously used for subsidiary coinage, and various forms of credit money, bank notes, letters of credit, private notes, clearing house notes, etc., may be used in the large account of transaction as they are used to-day."

"Gold monometallism, says its supporters, is the natural mature product of advancing civilization. The gold conspiracy of which so many silver advocates make so much simply does not exist, and never has been proven, however strongly asserted, because it never has existed. Each nation has come to the gold standard simply because it found it to its interest to do so.

"The crime of 1873, of which one hears so much, never really took place; silver had not been coined in the United States to any appreciable extent for 40 years before 1873 [that is, he means full weight silver dollars G. R.]. It was, in 1873, worth more as bullion than as money, so nobody desired it coined.

"The act of 1873 simply legalized demonetization, which had virtually been a fact for 40 years, nor was it

done surreptitiously or without knowledge. The measure was recommended by the Secretary of the Treasury in three successive messages, the bill was printed 13 times, considered through 5 sessions of Congress, and the debate concerning it occupies 140 pages of the Congressional Record.

"Most of the present prominent silver men who were in Congress at that time, like Senator Jones, voted for it. 'The crime of 1873' exists, therefore, only in the heated imagination of the, perhaps well-meaning, but mistaken opponents of sound currency. So with Germany's demonetization of silver, which was commenced in 1871 and completed in 1873."

The above, copied from the "Encyclopedia of Social Reform," by D. P. Bliss, a very excellent work, is, we think, a fair *expose* of the gold standardist position.

If gold monometallism "is the natural mature product of advancing civilization," why does it need strong law and active governmental interference to sustain it? If this assertion were true, gold would be the money of any country by natural commercial law. If a fair chance were given to silver in the race or competition as to which of the two would be adopted as the money of any country, in our opinion gold would not stand the ghost of a show. We never heard of a gold monometallist proposing a fair field and no favor. As a matter of fact, government has no more need of a protected money than she has of a protected creed or protected church, or of a science bolstered by bayonets.

If government coins one metal free of charge, she should do so for any metal, for in justice no distinctive privilege should attach to gold, nor is there any reason

in right or justice why government should command that a certain metal shall be used as money throughout its borders in exclusion of all others. This arbitrariness is no advance of civilization nor progress. It is despotism and a relic of ancient barbarism. It shows not how well we are governed, but how rigidly and unjustly we guard the interests of debt-owners at the public expense. As to the gold conspiracy which it is said does not exist, there is at least good reason to believe that it does exist in order to protect its immense holdings. It looks to an outsider as if there were a Bondholderbund, and as though it were particularly active about the 70's in the matter of demonetization, but this is not relevant to the merit of argument. (It is not so many years before when there was talk of demonetizing gold because it was getting cheap as reckoned in human blood, but that project dropped with the later larger discoveries of silver.)

However, we do not believe that this post-mortem so long after the murder of 1873 is conducive to any benefit, for what people want now is to know how to get out of the trouble that was left as a legacy.

As to the assertion, "Each nation came to the gold standard because it found it to its interest to do so," we defy any gold metallist to give any good reason why any nation should come to the gold standard or should continue in it.

If it is to the interest of any nation to increase the burdens bearing upon the industrious population that sustains it, in order to pamper the bondholding and money-lending class, then the assertion is true.

That the silver dollar (full dollar) in 1873 and before,

was worth more to its holder as bullion (or at its true market price) than the gold dollar, is true, and thereby we were upon a gold "basis" with light-weight subsidiary silver coins, half dollars, quarter dollars, etc. (as no light weight full dollar pieces were ever coined). The next assertion, however, is a most treacherous one, and it is a pity that college professors should have lent themselves to this underhanded pettifoggery in argument, viz., "The act of 1873 simply legalized demonetization, which had virtually been a fact for 40 years." Every one knows, especially every gold monometallist, that under the system known as bimetallism, the cheaper alternative will be the money, which for the 40 years spoken of was gold, but the law still remained in force, and should silver get to 16 to 1, or slightly more, then silver would be the money and the gold standard in the United States would be dropped (but not bimetallism), and the silver dollar of 1837 of 412.5 grains of United States silver would become the money unit of the United States, and its value the unit of value, and it would have been "sound money" or "honest money."

Silver was being produced in accelerated quantities, and possibly on this account, as probably on account of the (we believe there was a secret conspiracy) demonetization move made against it, the relative value of silver was lessening, or the price of silver was falling. In 1872, the ratio was 15.63, and in 1873, at 15.93; '74, 16.17; '75, 16.59. (See table of ratios.)

It is often said that we had a "paper money" or that we were on a "paper basis," during the war and for some years after, which is untrue and misleading.

We were on a gold basis always, but our dollar or money unit was constantly changing. Greenbacks at 60 cents on the dollar, meant that the dollar was 60 cents gold, instead of 100 cents. As it would be almost treason to say this, we got around it by saying that the price of gold had risen, or that gold was at a "premium;" for instance, when greenbacks are at 60 cents or the dollar was 60 cents (based on what you could get in the market, for the government promise to pay a dollar) then gold was at 1.66 2-3 cents, or gold said to be at 66 2-3 per cent premium and currency at 40 per cent discount, meaning that 60 cents was the price of a greenback dollar and 1.66 2-3 cents was the price of a gold dollar in greenbacks, but it was more customary to say that gold was at a "premium;" it seemed to preserve the integrity of the government paper.

Now, under these circumstances (be it remembered that these things were not obvious to the great public until then, at least, unaccustomed to looking into the money question), because the "currency" of the country was almost altogether paper. Congress, under the initiative of John Sherman, Secretary of the Treasury, passed the demonetization act in 1873. A more colossal piece of suicidal or mal-economic legislation was probably never perpetrated since the world began. By it, the option which the government most honestly had and under which all the heavy indebtedness of the Civil War was most notoriously contracted, was most ruthlessly cut off, and the opportunity which we had of paying the debt with the silver mines of the west and of our sister republics,

was most shamelessly and causelessly torn from us. To think that such a stupendous piece of stupidity (to say the least) could be committed by the high body who have our country's interest in charge is appalling.

It was as if a splendid stream of water (and one to which we had a perfect right, and for which an appropriate ditch was already dug) many times larger than the one being used, was about to reach the slow-moving government wheel, when it was cut off, diverted and turned to waste. The worst of it is that it was done by our high-paid and much-honored confidential agents. That nearly every man connected with the affair pleads ignorance, only shows "with how little wisdom the world is governed."

The ignorance is patent to any one who will read all the proceedings in the momentous affair, and shows how little the average Congressman of 1873 knew about vital national questions.

They usually furnish the occasion for clap-trap asseverations of patriotism and a color scheme display of "red, white, and blue oratory," a meretricious tribute to Buncombe for the solid honors and emoluments conferred by its vote and its labor. But if Buncombe likes it, who shall complain, for this is a government of the people by politicians for monopolists. However, things have changed somewhat for the better since 1873, for the average congressman now knows that the money question is important and really affects the industrial interests or the prosperity of the country.

If, as it is asserted, John Sherman knew the harm that would ensue, and was bought by a conspiracy to demonetize silver, it was a dreadful piece of treachery,

and were there such a thing as an eye for an eye and a tooth for a tooth, the flames of hell around his black soul could hardly pile high enough, heat hot enough, or burn long enough for retribution. But we hardly believe all this. John Sherman must have been imbued with the ideas of English financiers (then considered the best in the world), and English as well as continental political economists. Nearly all of these worthies, and especially the prominent ones, would preach to him the beauties of gold monometallism, and in his solicitude for the welfare of the United States, wherever he went to study the money question, which no doubt he did, he would be led by blind guides, and it is no wonder that the monetary affairs of the United States went tumbling into the ditch. "And now brethren, I wot that through ignorance ye did it, as did also your rulers."

Most of the members of Congress of 1873 did not know enough about the act to know what it meant (demonetization of silver), and if they had known, would not know that it seriously affected the welfare of the country, as this phase has been publicly brought out since that time. All of Sherman's cotemporaries, who abuse John Sherman so bitterly for what happened, knew nothing about it in 1873 (so far as we know), and could not predict, did not predict at that time, and the worst of it is, have built their attack and their arguments upon the structural logical weakness of the "bimetallism" or "16 to 1" of American politics.

Gold monometallism is a top-heavy idol with feet of clay, one of which rests on the fraud of the theory of the "standard of deferred payments," and the other on

the fallacies and mistakes of the "bimetallists" of the United States.

There is another practical objection to gold, inasmuch as silver has to be used in immense quantities for tokens to circulate it, which silver may be counterfeited beyond the possibility of detection, which has been done, and probably is constantly being done in the United States, which tokens must be redeemed by the labor of the United States.

It may be seen that the gold debt trust reaches across the world; so also do some other trusts; so also does the science of value, for it is not confined by the boundary line of any country. It is also clear that we do not need a gold money—we can use some other money quite as well, and with vastly more economy, that is, economy to the industry of the nation or true public or political economy.

CHAPTER XIV.

Debts.

In 1896, the national indebtedness of the principal countries of the world amounted to over \$31,000,000,-000.00, to wit:—

France,	11,228	millions	Gr. Britain,	3,138	millions
Italy,	2,498	"	A. Hungary,	2,940	"
Spain,	1,715	"	Russia,	2,430	"
Germany,	415	"	Turkey,	826	"
India,	607	"	Brazil,	587	"
Netherlands,	431	"	Egypt,	470	"
Portugal,	617	"	Mexico,	110	"
Australia,	1,044	"	Canada,	299	"
Belgium,	442	"	U. S.,	1,500	"

The debt of France is augmented by the fact that many things are charged there that would not be included in "national indebtedness" by other countries, like our state and county debts, etc.

Also many countries own "offsets," if they may be so called, in the shape of lines of railroad, etc., which is not the case in the U. S. and some other countries.

The sum total of this indebtedness would be considerably increased by including the debts of some other countries, like Greece, Denmark, Sweden, Norway, China, Japan, some British possessions, etc. This indebtedness has considerably increased rather than diminished since 1896. Great Britain has had an expensive war and so has the U. S.

Indeed, including our army and navy and pension list, we have the heaviest war budget in the world. Right now, July 5, 1900, we are on the eve of most portentous events, and probably dreadful war in China.

Immense as is the sum of indebtedness listed above, it represents far less than half the truth, as it was only intended to call attention to the enormity of the white man's burden, for to this should be added the debts of provinces, states, counties, etc., which have separate systems of indebtedness.

Moreover, there is the immense indebtedness of incorporations, like the debts of railroad lines, manufacturing works, etc., all of which are national, inasmuch as they rest on the same back and tax the same slave, Industry.

Labor, having built all the useful things upon earth, now finds itself perpetually taxed for the privilege of having put them here.

It requires far more than a billion dollars per annum to pay the interest on national debts alone, and this is taken from the people by taxation, another name less harsh-sounding for the forcible taking of the wages of an enslaved people.

The futile attempt to pay the interest on this vast amount, is exhausting the energies of the human race. A discouraging thing about it is, that it represents money paid in the waste of war, and effort that would have far more than built every railroad and telegraph line and canal in the world, and the Nicaragua, Malaccan, Russian, and Floridan canals to boot. The debts were usually made to feed the flames of anger, the appetite for murder, and furnished the means for wholesale destruction and ruin.

We are generally only paying for the privilege our

fathers took of indulging in human butchery and in the destruction of human happiness.

However, these men knew not what they did, nor hardly why they did it, and thousands of bold warriors conquered portions of the earth by the sword, and by their valor, energy, and devotion, have won our regard.

But here we are now face to face with a conquest made by a few snivelers called "Money Kings," who hold kings and emperors, princes, parliaments, presidents, and courts, as a means whereby rent is collected from toiling vassals. Never was conquest more complete, bondage more abject, or mastery more merciless and exacting.

For this debt the whole earth is mortgaged, and every industrious man, woman, and child held in pawn or peonage, forever, for under this system it can never be paid.

(Peon, Spanish, a pawn in a game of chess, also a man held in pawn for the debt he owes against which his labor is, ostensibly, at least, applied, also simply a laborer of the last, or hard-working and hopeless class. He was originally a foot soldier, from *pes*, *pedes*, afoot, and called a peon to distinguish him from a knight or caballero who rode horseback, from *caballus* and *caballo*, a horse.)

The money-lending partisans, or the bondholder swashbucklery, have taught and led many to believe that a national debt is a national blessing. It may be a blessing to the lender, who thus makes vassals of nations, but the debts of a nation are only in a greater degree those of individuals, and are a curse and a halter.

These greatest debts have usually been made under the pressure of war, and the sweat of ages of peace is required in addition to the precious blood shed in bat-

tle. The future is mortgaged by tyrants of the present and the past, and a sad thought it is that there seems hardly to be a man in high place on the face of the earth, who does not assist, by his teaching, to bind these "heavy burdens grievous to be borne" upon the backs of workingmen, not condescending so much as to lift a finger in their assistance. See Matthew, chapter 23, verse 4, and Luke 11, verse 46, and the rest of the two chapters.

The people of the earth, under present conditions, never can pay these debts, and they will remain until they drag the world into a new edition of the "dark ages," or they will be repudiated by revolution, for with the spread of intelligence and the pressure upon populations finding the struggle for existence more desperate, and the result of labor more and more unjustly distributed, the time must come, slowly perhaps, but surely, when these demands can not or *will* not be satisfied, and just men with sternness will raise the sword, demanding universal repudiation, and the emancipation of a world, or otherwise the system of the gold standard will be changed, and this colossal fabric of universal thievery thrown to the ground.

The interests of many of the advanced nations of the world, have been betrayed into the hands of demagogues, who are constantly resorting to the "sale" of bonds, by which the debt is increased, as if in reality there could be any such thing as a "sale" of bond paper by the government; this is euphony, or a method of felicitous expression, for the hard truth that it is debt, or that the labor of the people is given as security, or that workingmen, tugging in the harness, have been blessed by statesmen with an addition to their load.

We do not need more money so much as cheap gold and no more debt. The Son of Man, or the destiny of the human race, is bound by bonds to the gold standard, and continually wounded and battered upon by the vulture, Special Privilege.

Note.—Had the Lord told Adam on the day of his creation, that He would give him a salary of \$25,000 a year for taking care of the garden, and had he drawn his salary regularly till now, he still would not have drawn as large a sum as Wm. H. Vanderbilt left to his heirs at his death. 25,000 multiplied by 6,000 is equal to 150,000,000. Vanderbilt's wealth was estimated at \$200,000,000.

Note.—As an example of "congestion of wealth" in certain quarters, we copy the following from the San Francisco Examiner, April 5, 1899: "The wealth represented at the Vanderbilt Fair nuptials was enormous, among the wealthy ones present were the following" (the Astors, who live in New York City, and elsewhere, upon the fat of New York workingmen, that is, the fat that never gets to New York workingmen, seem to be conspicuously absent from this beautiful union of hearts and brilliant aggregation of Value. The sums are given in million dollars) Mrs. W. Rockefeller, 150; C. Vanderbilt, 125; Geo. and F. W. Vanderbilt, 50, each; W. D. Sloane and Dr. W. S. Webb, 50 each; Elliot F. Shepard, 30; Eldridge T. Gerry, Moses Taylor, H. McTwombly and C. H. Mackay, 25 each; H. P. Whitney, O. H. P. Belmont and Orme Wilson, 15 each; Henry Clews, guilty of many wise saws and modern instances in praise of the beauties of gold monetism; "banker 13 Broad St., N. Y., Dealer in U. S. bonds and other high-grade Investment Securities; correspondence invited," 10 (no charge for the advertisement); H. O. Havemeyer, Jr., Samuel F. Barge, Col. Wm. Jay, Wm. P. Thompson, Ogden Mills, John A. Burden, Jr., 5 each; other guests, 50; being a total of \$840,000,000.

According to the U. S. Treasurer's report of Nov. 1, 1899, the total stock of U. S. "money" outside of the treasury was \$1,963,716,148. In 1899 the total indebtedness, public and private, of the U. S. was \$44,190,022,164, and the annual interest about \$2,000,000,000. An elegant golden fleece, a pretty pelt skinned annually from American workingmen. The total stock of gold in the U. S. as estimated by the U. S. Treasurer in 1899 was \$945,798,788. If other than national debts in the world are as large in proportion as they are in the U. S. (which they probably are not), the united indebtedness of the world would be about \$1,000,000,000,000—one trillion.

Get W. H. Harvey's work entitled "Money, Trusts and Imperialism" on this subject of debt, etc., published by the Coin Publishing Co., Chicago, price 25 cents. Mr. Harvey deserves well of his countrymen and has done more than any other one man to bring these enormities before the American people.

The quantity of gold available for money in the world is estimated at \$4,400,000,000.

This estimation is admitted or accepted by both monometallists and bimetallists. Making it all 900 fine like U. S. gold, there are 8,108 tons; one ton being worth \$542,635, and at $1\frac{1}{4}$ cubic feet to the ton it would be 14,189 cubic feet, which is a block 20x20x35.47 feet. Remember this is counting it as 9-10 fine, like the standard bullion of the U. S., whereas were it pure gold it would be much smaller, because copper being much lighter or of less specific gravity than gold occupies a very large proportion of the space, probably one-fifth. This is the size of the calf, for this ball Terra it is not a very large one, but this bears no proportion to the devotion of its worshippers.

CHAPTER XV.

The Remedy

Is to weaken the purchasing power of gold, to diminish the value of gold, to cut off the demand for gold, to cut off the command that gold has over the services of men, to make it cheap as measured in human effort, which can be done by refusing to work for it, and the debts could be left to go ahead and pay themselves, which they would do with grand acceleration. We propose that the gold standard be abandoned and some other material adopted as money; not for the purpose of increasing the value of that other material (although incidentally this might and probably would happen), but for the purpose of lightening the debts of the world, payable in gold, and making it possible for the labor of the world to pay itself out of pawn or peonage, and become disenthralled. We therefore propose as money, pure silver, without alloy, and for a money unit the tenth part of a pound avoirdupois, or 700 grains thereof, and that this be coined and used for the purpose of paying labor and for all the purposes of money. Every form of paper may be employed as in gold money, the unit can be divided into halves and quarters, tenths, twentieths, hundredths, thousandths, and token coins may be used of nickel bronze or copper.

Conversion tables can be easily made so that we can

instantly and justly adjust wages and prices in a smooth step from one to the other without inconvenience, and after that the markets continue on seeking their levels, and prices would naturally regulate themselves as they always have done and as they do now, by what is called the "law of demand and supply." (Where is that law?) Our new money unit should be given a new name and the name "*dollar*" left to distinguish the old gold U. S. dollar which can be used and *must* be used for the purpose of paying old gold debts in the U. S. We will temporarily call this new money unit an x, being a convenient unit weight of chemically pure silver. Silver is worth now about 60 cents an ounce of 480 grains. Our new account unit is 700 grains; multiplying the gold price per troy oz. of silver by 111-24 or $\frac{111}{24}$ will give the gold price of the X or proposed new money unit. This table can be quickly and easily made, and the step from a gold basis to a silver one made with scarcely a ripple as far as labor is concerned, but the effect on the gold market would be magical and instantaneous and the purchasing power of workingmen increased immediately, and this prosperity would continue in accelerated ratio.

Labor is paid in value and it is not essential that it should come in gold. It can just as well be carried in some other metallic substance.

To illustrate what the effect would be, suppose that no laboring man in the world would for his services take gold or (which is the same thing) any token for gold, either of paper or metal; what would the effect be?

Gold being of no further use for the purpose of paying wages would "fall" immediately, and we would have "rising prices" and great would be the fall of gold, for

it sits exalted, raised to that bad eminence through unjust laws made for Greed and upheld by Folly or Ignorance.

However, it could never fall so low, never get so abject, but that it would be as good, weight for weight, for the purpose of paying gold debts with, as it was before. A gold dollar debt (barring interest) never goes higher than a gold dollar debt. If gold were so cheap that you could afford to throw it into a duck-pond to see the waves circle from the contact, it would still be the same gold and just as good for bond-paying. We can not, however, hope to start this reform all over the world at once, for such an attempt would be preposterous.

Men are not far enough advanced to take so enlightened a step, nor is it necessary; there must be a beginning to all things, a first time. We can do this very nicely in part of the world. If we could do this in the U. S. or in any part of it, it would tend to ameliorate the conditions, to slacken the strain or tension, and the least relaxation of pressure affords wonderful relief.

If we could permanently weaken the purchasing power of gold and get it on the scale of descent, we would ease the debts of the world, lighten the burden on the man with the hoe as well as on the man with the dynamo or the man with the book, and have "easy money" and "good times."

Anything that weakens the strength of the purchasing power of gold brightens the times, lightens the debts or burden, and increases the purchasing power of labor.

Wherever this has been done even temporarily, prosperity has come smiling in train.

This has been done by suddenly increasing the stock of money, as, for instance, by the discovery and exploita-

tion of America, also in modern times by the discovery of gold in California, Australia, and South Africa and Alaska, which no doubt has eased our recent times most wonderfully, but owing to the vast increase of gold indebtedness, ten Californias, producing as in 1853, would not suffice under present conditions.

Men are disposed to increase their stock of value; it is to their "interest" to do so.

A man who possesses a large quantity of value and is easy-going, or rather retired, as far as active business is concerned, is apt to be called "wealthy," while a man who has a considerable quantity of value and is active and disposed to initiate, or invest in, paying enterprises, or to "speculate" somewhat, is apt to be called a "capitalist." The first is more apt to collect interest on government bonds or something of the sort, the latter, profits in business or sometimes in "schemes."

The possession of a large amount of value means everything as far as "worldly" success is concerned; therefore men are inclined to hoard what is increasing in price or relative value, and to sell what is decreasing. They are naturally, therefore, inclined to increase their command over the services of men, which means their own immunity from the necessity of toiling, and the ability to do those things which please them. There is, in fact, no "vanity" (emptiness) in riches or value; it is a solid support and a powerful comfort, but should, according to dreamers, be fairly obtained.

Obedient to this law of hoarding and relinquishing, if gold were known to be on a declining market, the tendency would be to unload gold, and we would have heavy offers upon a declining market, and a general "slump" in gold; a colossal cheapening of the world's

indebtedness, as reckoned in the labor of men. There would be a great general rise in the value of other commodities as compared to the value of gold, though pound for pound these commodities among themselves might purchase what they did before. The fall would be so fast as hardly to be compared to the fall of silver in recent years, no doubt occasioned by demonetization, for there were no very large debts in the world, payable only in silver, and the tension upon it was small as compared to the tension that now obtains in the case of gold.

Silver has vastly the advantage of gold in any struggle for monetary existence, for gold does not serve the purpose for coin and money for moderate every-day small transactions from hand to hand, being too valuable, therefore practical reasons and scientific fact urge in favor of a silver money rather than a gold one.

Men can do business just exactly the same, whether gold be money or some other metal.

The only purchasing power there is in gold, is, of course, its value, and as this represents command over the services of men, the determination by labor of all kinds, not to allow the use of gold as a medium or means by which value in payment for services shall be conveyed to them, would cause the gaudy gold bubble to collapse, as it would be a cessation of the inflation or of the excessive command it has over human services.

As Labor blew it up or inflated it so can she cause it to collapse.

In order to do this it is expedient that some other metal be selected for money, and we propose silver, not from any particular love for silver itself but for the love of mankind for the good of the race, for the future of humanity, for the happiness of mankind.

It has been attempted to forever block the way to this remedy by that most iniquitous of all legislation, whereby the gold standard is foisted upon nations by despotic legal force.

We have suggested silver, but with no regard to its ratio, which is but another word for its gold price. We do not need 16 to 1, we might get silver to 8 to 1 and then gold men might clamor for 16 to 1, and it would be better at 1 to 1 or lower, as long as there is a debt in the world, for let a man who has a surplus of value spend rather than lend at usury, or, if he so lends, let him take his own risk as men do when they sow wheat.

The argument that gold was ordained by divine decree to be the money of the world, is rank human nonsense, only equaled by the contention that the same divinity is best served by a price of 16 to 1.

Silver men should go in and retake the establishment which they say was stolen from them. If there is anything particularly remarkable about this commodity gold, it is its beauty and the fact that it does not tarnish, but it would be quite as pretty if it were cheaper, and its general utility would be far greater. A descent in its value would bring it out of dark vaults into the light of day to subserve its natural use of preservation by gold plating and of ornament.

What we want is a spending world, not a hoarding world, rapid trade and communication and lively times. This is the rule of lessening value, easier acquisition or a larger return for the labor involved. This is true progress, and high attainment is to get useful things for little labor; and there is no just, no honest, no scientific reason why gold should be exempted from the usual law. If all of the gold in the world should disap-

pear to-morrow, trade would not be stopped, but there would be discovered a way to trade, and it would show us what slaves we are to Greed and Stupidity. It is nonsense to suppose that the wheel of commerce can only be well turned by the golden stream. As to "time contracts," there is no reason why the rule of cheaper production should be violated for the special benefit of gold or of any other money or commodity, and standing sponsor to values or prices is none of the business of government; and this rule should not be varied for the benefit of the owners of gold or of any other commodity, or of the owners of obligations whereby gold or any other commodity is to them contracted to be delivered.

Debts are contracts for the delivery of material. In trade value usually accompanies material. The mind of man does not give, can not give, nothingness any trade value.

There are no commercial debts for the delivery of value alone, nor can such a debt be expressed, as if heaven would not, that men should be enslaved. The debts of the world outside of those which are contracts for the delivery of gold money are insignificant. In fact, so much so that the ordinary mind only thinks of money debts, whereas contracts for the delivery of any other species of goods are not essentially different.

Wherever anybody owes a debt, somebody must own it; the first is called a debtor (Latin *debitum*, a debt), and the latter the creditor.

Whenever the word "credit" is used in business, there, also, can the word "debit" or debt be used. The credit system is just so much and with greater reason a "debit" system, wherefore, no man can talk intelli-

gently of "credit" without at the same time including debit, for both sides of the shield must be considered in a true comprehension of the question. Debit and credit are more inseparable than Ruth and Naomi.

If a nation's credit is said to be good, it means that its ability to contract a "debit" or debt is good, and is based upon its ability to extort, tax, or sweat it out of the people.

Debts are satisfied absolutely and honestly by the delivery of the material specified, and there can be no obligation as to its value.

If a man owes a debt, it is no true part of government or law to make more valuable or more difficult of acquisition the material with which said debt is to be satisfied. Let him have the benefit of every means whereby he may discharge and forever cancel this obligation for so long as it exists, he is to that extent held in bondage.

This is true, also, of the industrious body of workingmen and women of our country,—astronomers, cooks, seamstresses, plowmen, *et al.* There is not a single reasonable argument in favor of the gold standard, which acts as an endless belt carrying the wealth of nations into the lair of the Golden Tiger.

The game, which is one of silent legal confiscation, has its government license, its cappers, its official bullies, and its sneaking hangers-on, besides a large uncertain number of worshipful, enthusiastic but ignorant or "gullible" advocates, like Professor Laughlin, for example.

Columbia, on her knees before a half-dozen bunco financiers of haughty finance, is an inspiring spectacle, and it is refreshing to be told by college professors that

their own or their ancestors' "self-denial" and "sacrifice" put these moneyed gentlemen where they are, and that Extravagance keeps Industry down.

At least this is the sacrifice doctrine of gold-bug political economy as it is taught by the Levites in most of our colleges, whose walls, camps, laboratories, instruments, and books have been built by the brain and brawn of Labor, and the salaries of whose professors are of necessity bled from the body politic, taxed from workingmen. Industrious, earnest, honest men have a right to expect a better return and to become a little impatient at times at the emptiness of the result, most particularly and especially in the department of political economy, which does not seem able to see any public wrong, much less announce any remedy. Its principal business seems to be to tell the workingman to keep quiet, that things as they are are all right, especially the gold standard, which is of God and therefore something with which workingmen shouldn't meddle, and they should tread lightly about such subjects for fear of waking somebody, for the chair of Political Economy is usually a dainty, high-paid, gold-bug snoozery, and it is treason, profanity, sacrilege, blasphemy, anarchy, to bring a railing accusation against so perfect a system—of ignorance, despotism, and robbery.

The debt of the world can almost be called the sin of the world. Indeed Christ, who talked for all mankind, and who is and was the great Political Economist, the great Teacher and Physician, says in the Lord's prayer, according to the testimony of Matthew, chapter 6, verse 12, "Forgive us our debts as we forgive our debtors." If "forgive" should mean here the same as to end, to do away with, to finalize, to redeem, to re-

claim, to return, to wash away, etc., it would read, Do away with our debts as we do away with our debtors (*i. e.*, by paying them and incurring no more debts).

It seems almost as if this were a necessary preparation to the ushering in of a happier period on earth often alluded to as the "Kingdom of Heaven," where the last would be first (that is, the greatest servant or benefactor held in the highest esteem), etc.; and, if so, it has a greater significance than at first appears, and it may be that this is the true interpretation when heard aright, for it may be that hearing we have not heard, and seeing we have not seen.

In Luke 11 the words are somewhat different, "and forgive us our sins, for [as] we forgive every one that is indebted to us," as if a world without debt would be a world without sin. Indeed poverty and crime may be considered as diseases of the body politic, to be treated more certainly by reaching the cause of the disease rather than temporized with by soothing lotions (charity) or local excisions (imprisonment and punishment by death, etc.). Indeed, it is in these matters that people must look to their great political economists as great physicians, teachers, guides, counselors, and friends.

If the Lord's Prayer should mean what we have indicated, and it is quite possible that it may, for the idea grows stronger under stronger reflection, it is time that the thoughtful Christian world upon which is charged the redemption and regeneration of mankind should be "about" the practical accomplishment of this "business." It would be the realization of what it has daily and hourly been praying for through the whole of the long length of these nineteen centuries of turmoil, robbery, and

slaughter. Mankind is becoming more discriminative and properly irreverent toward holy pretense and pious cant or mere eye-service and lip-service. Lives that are led only for the approval of Mrs. Grundy and Praise-God-who-hath-sanctified-us-and-who-hath-made-us-to-be-better-than-other-people incense is not enough, for this is a world to be saved from wrong, and of Christianity the world demands meet fruit. If by light from one text we may read another, then verses 19, 20, and 21, 3d chapter of Acts, might read as follows: Reform ye, therefore, and change your theories that your debts may be blotted out, when the times of prosperity shall come from the presence of the Lord (or right government).

And He shall send Peace, which before was preached unto you, which shall be kept from you till the times of the restitution of all things (equitable distribution of wealth or value) which God hath spoken by the mouth of all His true men of science since the world began.

To ask the government of the United States to coin a standard silver coin that may be used for a money unit, would be too great a task. It requires too much anticipatory or preliminary education. Indeed, it is with the greatest difficulty that the justest measures or the most necessary for the public good can be gotten through our too sordid, venial, and time-serving Congress, and, under the prevailing sentiment, any measure opposed by the bond-holding class, could never get through. Because of "influence" an interoceanic canal is deferred and a poisoned army beef horror white-washed. Dead soldiers don't count.

Less can be expected of the Parliament of England, even more thoroughly dominated by the gold standard fallacy.

As to attempting to have this done by international agreement the idea is preposterous, for other nations are far more devout worshipers of the golden calf than is our own; to such an extent is this true, that the very expression "international agreement" in this country on this subject is treacherous and only a grand political subterfuge, which great "wire pullers" regard as a huge joke, and at which they laugh in their sleeves while it furnishes an elegant sop to the "rank and file."

Therefore, we propose that private individuals, miners, merchants, and others shall at once form a company and coin silver in San Francisco. The money unit to be one-tenth of a pound avoirdupois pure silver, should at once arrange for a silver clearing house, and silver drafts, cheques, etc., and put the whole machinery of trade upon a silver money basis, make price lists of goods in silver, establishing silver business agencies in San Francisco for all the world, sending out silver price lists to China, Mexico, the Philippines, and other silver-using countries, arranging a system so that silver mines at least could begin at once to pay their labor in silver and so that this money could buy all goods with as much ease as is now done with gold money and its tokens. It is not necessary that this company should buy large quantities of silver. Owners of silver could send their silver to be coined and pay for the refining and coinage. Remember that the money is pure silver which is a great advantage in many ways. Appropriate devices could be selected, and an appropriate name given to the new silver unit.

This would make it possible to pay labor and to carry on the whole cycle of trade upon a silver basis, something impossible to do in the United States as

things are now. Favorable arrangements could undoubtedly be made with the government of Mexico. For instance, the president of Mexico could issue a *decreto* or decree making the pound weight of Mexico in the future, to exactly correspond with the avoirdupois pound of the United States, for at present there is a slight difference between the Mexican libra and our pound. Also a decree establishing the just ratio between these coins and Mexican dollars, which might be mutually arranged by this company as to Mexican dollars. Similar arrangements could probably be made with every country in South America. The commerce of China could be bid for, with manifest advantage over hide-bound gold standard countries, for an understanding or harmony by weight as between the new weight or coin of this company, and the various Chinese taels, etc., could quickly be found. Agencies could be placed in other parts of the United States and of the world. Silver miners could trade with silver agencies in Kansas City, Chicago, or New York, and other places, and there would be a favorable disposition by laboring men to adopt the new pay, especially as soon as they understood its meaning and could see that it is quite as convenient, besides its use would be conducive to the public welfare and therefore patriotic or generally economical. After all, the exclusive "royal attribute" of fixing the money of a country by such a law as that of the United States of 1873 or as was repeated in 1900, is only a piece of despotism, a diabolism, for we no more need a despotically protected money than we need a despotically protected creed, or a despotically abridged commerce.

It is time for bankers to get out of the governing business, and that government quit this dirty little

intermeddling in the matter of the metal trade which is fraught with such vast and injurious consequences in the matter of the labor trade. An agency should be placed in the Philippines, where we are going with the sword in one hand and the gold standard in the other, so that the Filipinos shall not be forced to a gold basis as India was by a ruthless and violent perversion of power ("in council"), where heavy taxes for a gold indebtedness are wrung from a skeletonoid population. This silver demonetization in India is resented by the Indian population, and justly so, for in this England or her agents have much to answer for. If the people of England or the Government of Britain knew what is conducive to true British interests it would put India at once to a silver basis, for the gold standard there does in nowise benefit the British people (except a few debt kings), and only augments what it pretends to diminish, that is, the evils due to the fall of the purchasing power of silver.

It is in nowise politic to put them under the same system of wholesale robbery as that suffered by the man on British soil from whose ankles the shackles never fall, *i. e.*, the British workingman.

The immense trade of China is almost at our doors, and it is to our interest to make this great city of San Francisco to be one of the grandest ever known, as well as to benefit every other city in the United States and in the world. We have incidentally immense mining interests in the United States that will be benefited, all calling for immense supplies of machinery and other merchandise.

As to legal objections, nothing can prevent people from refining silver and making chemically pure silver, nor from stamping metal and certifying to its quality and weight.

The Constitution of the United States, in Article I, section 8, paragraph 5, says, "Congress shall have power" "to coin money, regulate the value thereof and of foreign coins, and fix the standard of weights and measures." In the first place the article is not mandatory; it simply says, "*Congress shall have power.*"

The company technically would not coin money, it would simply stamp metal, which it has a perfect right to do, and it has a perfect right to refine or make chemically pure silver. If other people or if any people should use this stamped metal or coinage as money, the government of the United States could not prevent it, and probably would not attempt so manifest an exercise of despotism.

"Regulate the value thereof." Here our forefathers gave Congress power to do something it can not, could not, never did, nor never can possibly do.

"The value thereof" is regulated by trade by "demand and supply," "and fix the standard of weights and measures." This money we propose to weigh by the avoirdupois standard, so there can be no collision here.

Sec. 10, Art. I, says: "No state shall enter into any treaty alliance or confederation; grant letters of marque and reprisal; coin money; emit bills of credit; make anything but gold and silver coin a tender in payment of debt; pass any bill of attainder, ex post facto law, or law impairing the obligation of contracts, or grant any title of nobility."

In reading by inference it seems by this that a state can make silver coin a tender in payment of debts, or recognize it as an account unit or money unit. If so all the western silver states can legally be put upon a silver basis and can specify their money unit, and we

propose the tenth part of a pound avoirdupois or 700 grains. It is not at all necessary that the state should coin it, for that can be done by a private firm or by a company. All that it is necessary to do is to fix the account unit (as, for instance, 700 grains pure silver). Any mass of bullion if we know its weight and fineness can be calculated into its number of these account or money units as easily or rather more easily than it can be counted into ounces troy of pure silver. If it were pure silver its avoirdupois weight at once gives its number of these new money units. The only other paragraph in this Constitution possibly germane to the subject is paragraph 6, section 8, Article I: "Congress shall have power to provide for the punishment of counterfeiting the securities and current coin of the United States."

Neither this coin nor this money can possibly be called counterfeit.

Armed with samples of these goods, that is, the new account unit, some appropriate literature, and a few intelligent orators, more work could be done for silver money in a week than has ever been done all *taken together in Congress*. The issue would be forced upon the government and people of the United States, and would have to be met and could not be evaded, and gold monometallism in the United States could be easily and finally overthrown, also in England and Europe as well, for the example would be catching, and people are tired of government by gold debt kings.

The opportunity for San Francisco and the west is one that has hardly been equaled in the history of the world, and to put it into practise would cost but little and bring in tremendous returns, for the idea is simple, scientific, practical, and of vast consequence.

CHAPTER XVI.

Origin of the Dollar.

A silver piece approaching our silver dollar or the Spanish *peso* (the word *peso* means originally weight; in Spanish the verb to weigh is *pesar*; *pesar* as a noun also means grief or sorrow, as being something that weighs painfully on the soul) was originally coined in St. Joachimsthal (San Joaquin Valley) in Bohemia.

They were first called St. Joachimsthalers, then thalers, in Holland dalers, in England dollars. For the origin of the sign \$ many fanciful theories have been promulgated, some saying that it came from the letters U S. Others have said that it is the caduceus or wand of Mercury, which is usually represented as encircled by two serpents. Mercury in one of his journeys encountered two serpents raging in mortal combat and placed his wand between them when they peacefully encircled it with their heads toward the point and thus it was carried by the messenger of the Olympians, a swift-footed master of tact, and a pleasant and able agent, besides being at times a shifty rogue. Another story is that it is a corruption of the figure 8, because a Spanish peso was also coined into eight reals, and it is said that these dollars were called "pieces of eight" (though the Spanish *media onza* would be a piece of eight dollars or a Spanish *escudo* or gold two-dollar

piece would be a piece of eight shillings), especially in stories of pirates of "the Spanish Main."

Indeed piracy was for a long time an exceedingly profitable business around and about the Caribbean Sea and the Gulf of Mexico.

The pirates were usually English, French, or Colonials (anything not Spanish), and occupied themselves in trading in slaves and mahogany, tortoise shell, rosewood, logwood, India rubber, and in African and American gold, and American silver exclusively, not being able to get any from anywhere else, and in collecting a high tariff for revenue only. Though active and energetic men of business, and, in many cases, of great natural ability as well as of acquired accomplishments, owing to free-trade theory and scientific practical interference, they were at last (perhaps unfortunately for them) obliged to suspend business.

However, they were the first to demand decently-modeled ships, and some good, honestly-made mahogany vessels were turned out in their own shipyards. Our fathers got these "pieces of eight" or "Spanish milled" (minted) dollars through trade with the West Indies and other Spanish lands and largely through these pirates, the Anglo-American colonial ports furnishing them friendly harbors and favorable points of trade.

In old times the only difference between a Spanish dollar made in Spain and one made in a colony was that the colony-made dollar had a small figure of a crown over the mint letter. M meant Madrid, Spain; M, with a crown over it, meant the City of Mexico; Z, with a crown over it, meant Zacatecas, Mexico.

The money of the American Colonies at the time of

the Revolutionary War and before was silver, and the money unit was the "Spanish-milled dollar." We got the sign \$ at the same time that we got the dollar. In old times the sign was written with the S turned like a Z and crossed by two perpendicular lines, and was exclusively so written in Revolutionary times, and is so written now by Spaniards and Hispano Americans (though in the United States it is often an S with only one bar over it). The sign \$ is a corruption of *pp*, standing for *pesos*, the plural of *peso*.

Written rapidly *pp* would soon transform itself into the dollar sign \$, which was used long before there was an English settlement in America.

This method *pp* of making the plural by doubling the initial letter has fallen almost into disuse; however, examples of it are still extant, for instance, *nn* stands for *nombres*, meaning names.

This sign \$ probably took well because it would not be confounded with another common sign in commercial books, being also *pp* and standing for *paginas*, meaning pages; *pp* 68 would mean page 68.

The Spaniards inherited this method of writing the plural from the Latins. An example of this is LL. D., Legum Doctor or Doctor of Laws.

CHAPTER XVII.

History of American Money.

Philip V of Spain, grandson of Louis XIV, was born in 1683, proclaimed king in 1700, and died in 1746. Fernando or Ferdinand VI, king of Spain, son of Philip V, was born in 1712, reigned from 1746, died 1759. Carlos, third king of Spain, was the son of Philip V, and brother and successor of Fernando VI, born 1716, conquered the two Sicilies 1734-5, reigned there till 1759, and reigned in Spain from 1759, and died 1788.

It is under these reigns that must have been coined most of the dollars with which our revolutionary ancestors were acquainted. Philip V was succeeded by Carlos VI, son of Carlos III, born 1748, reigned from 1788 to 1808, when he was forced to abdicate.

As Congress adopted the first American dollar in 1792, not many of the coins of this latter reign could have been in circulation. At 415 grains .906 fine the Spanish dollar would contain 375.99 grains of Ag., and the Congress of the Confederation or "Continental Congress" in 1786 declared the Spanish dollar to contain 375.64 grains of Ag. It had then already been adopted as the money unit for the United Colonies.

The dollar coins of the three reigns mentioned above, according to "Smith's Encyclopedia of the Gold and Silver Coins of the World," were nearly all .906 fine,

and most of them weighed 415 grains, though there were many of 417. There was one debased dollar coined for Mexico .896 fine, but even this one contained 374 grains of pure silver.

All the others were .906 fine, but there were many Spanish quarters coined, four designs differing slightly, all of the fineness .906 and of the weight 103 grains, which would be 412 grains to the dollar and would contain 93.318 grains of pure silver to the quarter or 373.272 grains to the dollar.

In later times Spanish coinage suffered some confusion as in the coinage of five pesetas to the dollar (in imitation of the French franc) under Joseph Bonaparte and others and also more debasement crept in particularly among minor coins.

These old uniform quarters were strongly marked "pillar" or the sign of old Castile quarters, and the dollars also, and they got a good reputation throughout the world and were brought into prominence as being *de buena ley*, that is, up to the mark in fineness, and most of them extant in revolutionary times were coined under Charles III, of the big nose.

The first American silver dollar was, by the law of 1792, to be of the value of a "Spanish-milled dollar, as the same is now current."

Alexander Hamilton, a native of Jamaica, W. I., and the son of a French mother and British father, spoke French fluently and easily (and probably Spanish as well), was quick at figures, acquainted with foreign trade, and had, for the times at least, a "masterly skill in bullion and coin," and was consequently of the advisors in the matter of the new dollar and mint of the United States.

Hamilton "found" that the Spanish dollar contained 371.25 grains of pure silver to the dollar, by, it is said, taking twenty very much worn Spanish coins and assaying them and taking the average. Hamilton must have selected very much worn Spanish quarters, for he could not have given the Spanish coins or money a fair showing and at the same time obtain such a result.

We are inclined to think that he was very much assisted in his search by the fact that 371.25 is divisible by 15, giving as a result 24.75 and 24.75 is divisible by 11, giving 2.25, which, added to 24.75, makes 27, which was $\frac{1}{10}$ of his eagle of 270 grains, $\frac{1}{11}$ fine, and containing 247.5 grains of pure gold and "equal in value to 10 units or dollars." 371.25 is divisible by 11, giving as a result 33.75, which, added to it, gives 405, which was the weight in grains of the dollar recommended by Hamilton. For Hamilton recommended that the silver dollar should contain 371.25 grains of pure silver, should be $\frac{1}{11}$ fine, and should weigh 405 grains.

The act of 1792 changed this somewhat, for though it adopted his eagle of 270 grains $\frac{1}{11}$ fine to be of "the value of 10 dollars or units" and made $\frac{1}{11}$ eagles and $\frac{1}{11}$ eagles accordingly, "the dollar or unit of silver" was made to weigh 416 grains and to contain 371.25 grains of silver, halves, quarters, dismes, and half-dimes, were made accordingly. (Dimes is from law French, meaning tenth, like decime, same as dime.)

Our childlike fathers could not bear to see the new dollar so much smaller than the Spanish dollar of 415 to 417 grains, so they made their dollar to weigh 416 grains, which was an average and rounder number, divisible by 2 and also by 4, therefore the first great American silver dollar was a corruption and debase-

ment of the old Spanish dollar which it drove off the American market. Worn Spanish quarters, etc., however, still remained.

This law of 1792 had a clause in it explicitly stating that 1 pound of gold should be worth 15 pounds of silver.

In 1834 the eagle was changed to 258 grains, gold contents 232 grains, other gold coins accordingly.

This changed the ratio between the gold and silver contents of the dollar coins to $16\frac{2}{3}$, but the ratio between their gross weights was now $16\frac{32}{33}$ when before the ratio between their gross weights had been $15\frac{1}{4}$.

In 1837 there was a second change, the eagle was made to weigh 25.8 grains .900 fine, gold contents 23.22 grains; at the same time the silver dollar was made to weigh 412.5 grains .900 fine, silver contents 371.25 grains, which was the same silver it had before, for the fineness was changed but not the silver contents, or the government took out some copper but did not change the silver.

Since 1837 the fineness both of the gold and of the silver coinage of the United States has been the same, that is, 900 thousandths, and the gross weight of the silver dollar as it comes from the mint, bears the same proportion to the gross weight of the gold dollar as the weight of the pure silver contents of the silver dollar bears to the weight of the pure gold contents of the gold dollar; that is, 412.5 bears the same proportion to 25.8 as 371.25 bears to 23.22. This proportion expressed decimally is about 15.988 to 1, or exactly it is the proportion that $15\frac{8}{81}$ bears to 1. This is the "ratio of 16 to 1" of American politics, meaning the ratio or relationship of the weight of the silver dollar coin of

the United States as compared to the weight of the gold dollar. The "bimetallists" of the United States would have this to be the relationship of the value of any weight of gold as compared to the value of an equal weight of silver, so that the value of the bullion of a United States silver dollar coin should be equal to the value of the gold dollar of the United States. That is, they urge that the government should "fix" at "16 to 1" the value of any weight of gold as compared to the value of the same weight of silver, which is the ratio of "16 to 1" so vociferously and unscientifically demanded by the "bimetallists" of the United States.

They are like children crying for the moon, and though they clearly see the iniquity of the gold standard and will be the means of saving the country and the world, still they have not generally been made acquainted with the logical weakness of the 16 to 1 position. It is here that lies the great "bog where armies whole have sunk." Nevertheless, their position in the matter of logic is stronger than that of the gold standardists, and far better in many other directions. Wherefore (in our opinion), it is the duty of men to work like beavers until election, and then to cast their votes solid and unscratched against the present administration, which is inclined to usurpation, despotism, and monopoly.

The gold coinage has not been changed since 1837, but its character in 1873 was changed inasmuch as in that year silver money was cut off and gold selected as the only standard.

The Act of 1834 entitled, "An act concerning the gold coins of the United States and for other purposes,"

changes the weight of the gold coins, says nothing about ratio although that is to be understood, and provides for the redemption of the older gold coins.

The Act of 1837 entitled, "An act supplementary to an act entitled, An act establishing a mint and regulating the coins of the United States," changes the gold coinage slightly and the fineness of the silver dollar, but not its silver contents. This act provides that gold coins shall be legal tender for all sums from \$2.50 (the smallest gold coin) up, and that silver coins shall be a legal tender for all sums whatsoever. So this repeats bimetallism and the weight of the silver dollar.

The Act of 1853 is entitled, "An act amendatory of existing laws, relative to the half dollar, quarter dollar, dime, and half dime," provides that the weight of the half dollar shall be 192 grains .900 fine and others proportionate, and that these silver coins shall be legal tender in payment of all sums not exceeding five dollars, and that "no deposits of bullion for coinage into the half dollar, quarter dollar, etc., shall be received other than those made by the treasurer of the mint as herein authorized and upon account of the United States." This last shows that these were token coins, and that the old silver dollar retained its power which was taken from it by the Act of 1873.

The Act of 1853 authorized the coinage of the \$3 gold piece, and on March 3, 1849, was authorized the coinage of the double eagle or \$20 piece and also of the gold \$1 piece. The \$3 piece was adorned with the head of an Indian warrior in full dress. Between the lines, this Act betrays a disposition to demonetize silver. The idea was to "protect" the product of the American gold mines.

The Act of 1873 entitled, "An Act revising and amending the laws relative to the mints, assay offices, and coinage of the United States," in section 14 provided "that the gold coins of the United States shall be a \$1 piece, which, at the standard weight of 25.8 grains, shall be the unit of value (that is, its value shall be the unit of value or it should be the money unit; this is the demonetization clause that cost the republic so dearly in labor); a quarter-eagle, or \$2½ piece; a \$3 piece; a half-eagle, or \$5 piece; an eagle, or \$10-piece; and a double eagle; which coins shall be a legal tender in all payments at their nominal value when not below the standard weight and limit of tolerance provided in this Act," etc.

The section concerning silver looks tricky. It is section 16 and provides "that the silver coins of the United States shall be a trade dollar, a half dollar, or 50-cent piece; a quarter-dollar, or 25-cent piece; a dime, or 10-cent piece; and the weight of the trade dollar shall be 420 grains troy, the weight of the half dollar shall be 12 grains and one-half a grain; the quarter dollar and the dime shall be respectively 1-2 and 1-5 the weight of said half dollar; and said coins shall be a legal tender at their nominal value for any amount not exceeding five dollars in any one payment."

It is to be seen that by this law the bulwark in favor of the people of the old silver dollar was swept away, and this blood-sucking ghost of debt and interest allowed to come nearer to the hearts and hearths of the people.

By the Act of May 3, 1887, the trade dollars were called in and "all laws and parts of law authorizing the coinage and issuance of United States trade dollars are hereby repealed."

On February 28, 1878, Congress passed a law for the coinage of what it was pleased to call "a standard silver dollar," but which was, in fact, but a token coin for gold. These are the every-day "buzzard dollars." The act is entitled, "An act to authorize the standard silver dollar, and to restore its legal tender character." It provides "that there shall be coined at the several mints of the United States silver dollars of the weight of 412.5 grains troy of standard silver as provided in the Act of January, 1837, on which shall be the devices and superscriptions provided by said Act; which coins together with all silver dollars heretofore coined by the United States of like weight and fineness, shall be a legal tender at their nominal value for all debts and dues public and private except when otherwise expressly stipulated in the contract."

This repudiates the old silver dollar pieces coined before 1873 under undoubted bimetallism. This law says nothing about the law of 1873, and if these silver dollars were not sustained we would have dropped to a silver basis, which is what the bimetallists of the United States wanted and what would have been all right had it not been retroactive. For instance, if instead of the clause "except where otherwise stipulated in the contract," it had said "to be contracted in the future," then we would have gone immediately to a silver money or "basis," and the silver dollar would have become the "money unit."

As a matter of fact, at least to my mind, every contract since 1873 where dollars is mentioned must be gold, for in the Act of 1873, the dollar is explicitly the gold dollar. The value of the gold dollar was consequently the unit of value or the "value dollar," and the

United States was morally bound to make all legal tenders metallic or papyric as "good" as this. An honorable nation does not need to be more than morally bound.

However, to secure the silver dollar in its token character and the gold dollar in its sovereignty and to ease the minds of men as to the status of the coinage and money of the United States, the Act of November 1, 1893, was passed, entitled, "An Act to repeal a part of an Act approved July 14, 1890, entitled, An Act directing the purchase of silver bullion and the issue of treasury notes thereon and for other purposes," which says, "And it is hereby declared to be the policy of the United States to continue the use of both gold and silver as standard money, and to coin both gold and silver into money of equal exchangeable and intrinsic value, such equality to be secured through international agreement or by such safeguards of legislation as will secure the maintenance in the parity of value of the coins of the two metals and the equal power of every dollar at all times in the markets and in the payment of debts. And it is hereby further declared that the efforts of the government should be steadily directed to the establishment of such a safe system of bimetallism as will maintain at all times the equal power of every dollar coined or issued in the United States in the markets, or in the payment of debts."

The clause "in the markets" shows that the silver dollar and the gold dollar must be kept at equal exchange in trade, which can only be done by redemption through acceptance for dues to the government as taxes, revenue, etc., or in case of excess, by gold coin.

The last sentence beginning, "And it is further de-

clared," can be construed as giving the president power to purchase or rather borrow gold for redemption, as was done (properly it seems to me) by President Cleveland.

This law kept us on the dearer standard. It is bimetallism where the government is responsible, for instance, if silver should rise so that the silver dollar should be by weight more valuable than a gold dollar, then under this law the man with gold could demand silver dollars of the government in exchange for gold dollars.

Altogether the law was a juggling melange with its curious methods of expression like "intrinsic and exchangeable," "such a safe system of bimetallism," etc., nevertheless it makes clear the duty of the government with respect to all its coins and paper.

The next law is the Act of 1900, which confirms the gold standard beyond the possibility of a doubt. It was passed March 14, and is entitled, "An Act to define and fix the standard of value, to maintain the parity of all forms of money issued or coined by the United States, and for other purposes," and provides "that the dollar consisting of 25.8 grains of gold 9-10 fine, established by section 3511 (practically Article 14 of the Coinage Law, of 1873), of the Revised Statutes of the United States, shall be the standard unit of value, and all forms of money issued or coined by the United States shall be maintained at a parity of value with this standard, and it shall be the duty of the Secretary of the Treasury to maintain such parity." This is a great benefit to opponents of the gold standard, as it will prevent silver men from shooting backwards, and puts the issue where direct war may be made upon this heresy

of the gold standard, this craze of place worshipers, the folly of the *fin de siècle* 1900.

All silver dollar pieces coined since 1837, whether standard or token, have been .900 fine and contained 371.25 grains of pure silver. The half dollars up to 1853 were just half the whole dollars, and so proportionately with the other minor coins.

In 1853 the first token silver was coined. The half dollar of 1853 weighed 192 grains, so that two half dollars weighed 384 grains gross, they were .900 fine, and two half dollars contained 345.6 grains of pure silver or one half dollar 172.8 grains of pure silver.

The half dollar of since 1873 is 9-10 fine, and weighs 192.9 grains, or two half dollars weigh 25 grammes or 385.6 grains, which is the weight of the French 5-franc silver piece, and contains $4\frac{1}{2}$ grammes of pure silver or 347.22 grains pure silver, and the half dollar half of this. The "nickels," or 5-cent token United States coins are of an alloy $\frac{3}{4}$ copper and $\frac{1}{4}$ nickel. The bronze pieces are 95 per cent copper and 5 per cent tin and zinc "in such proportion as may be determined by the director of the mint." Two silver half dollars are 25 grammes or 385.808 grains of silver, .900 fine, and weigh very nearly 935 thousandths as much as the silver full dollar, or the "buzzard" dollar of to-day; divide 385.808 by 412.5. The 5-franc silver piece of France and various other silver pieces of South America and other countries weigh 25 grammes. There are 99 ounces of fine silver in 128 "buzzard" dollars of 412.5 grammes .900 fine.

CHAPTER XVIII.

Money Coinages and Weights of the World.

Sometimes in this chapter we will use the signs Au., Ag. and Cu. being the chemical symbols for gold, silver and copper, or *Aurum*, *Argentum* and *Cuprum*, and they always mean chemically pure gold, silver or copper, or what in the case of gold is called "fine gold;" of course there can, truly speaking, be no gold but fine gold. Looseness of thought or expression in this regard leads to some confusion, for instance the money of the U. S. is said to be gold .900 fine in gold and the rest copper. Now as a matter of very accurate statement the money of the U. S. is not gold but is an alloy of gold and copper, but the word gold is applied everywhere in England or America or wherever English is spoken, to any conceivable alloy high in gold, and to be clear we say that a certain gold is so many thousandths fine, for instance U. S. coin gold is $\frac{9}{10}$ gold and is therefore .900 fine, the rest, or .100, is copper.

But suppose that we should say, the money of the U. S. is gold .900 Au. .100 Cu. it would be short and clear, and this is the system we shall pursue in some cases at least in this chapter.

The data for most of this chapter was compiled from the Statesman's Year Book for 1900 published by McMillan & Company, London, and from the very

excellent work entitled "The World's Metal Monetary Systems," by John Henry Norman, member of the London Chamber of Commerce, published by G. P. Putnam's Sons, New York, and in London by Sampson Low Marston & Co., price \$2.00.

EUROPE.

SCANDINAVIAN UNION.

Norway, Sweden, Denmark and Iceland.

By a treaty signed May 27, 1873, with additional treaty signed October 16, 1875, Sweden, Norway, and Denmark (Iceland is a dependency of Denmark) adopted the same monetary system. The Swedish Krona and Norwegian and Danish Krone (Crown) each worth 1s. 1½d. sterling or about 18 kroner to the pound sterling, U. S. Treasury, \$0.268, is the money unit.

The money is of gold .900 Au.

In Sweden, national bank-notes for 5, 10, 50, 100, and 1,000 kroners are legal means of payment and the bank is bound to exchange them for gold on presentation. The case is the same in Norway, where there are also notes for 500 kroner.

The Scandinavian Crown weighs—

	Gross	Fineness	Au.
grammes	.44803	.900	.40322
grains	6.9141		6.22275

The gold 20-kroner piece of 8.960572 grammes .900 Au. contains 8.0645 grammes or 124.454 grains Au.

The silver krona weighs 7.5 grammes .800 Ag. and contains therefore 6 grammes of Ag. Of silver coins there are 2, 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, and $\frac{1}{16}$ crowns and for smaller denominations there are bronze coins. One kilogram or 15,432.34874 grains of Au. is used to make 248 10-crown pieces or 124 20-crown pieces or in fact 2,480 crowns. The charge for coining 20-crown pieces is $\frac{1}{2}$ per cent and for 10-crown pieces $\frac{1}{4}$ per cent. Tolerance $1\frac{1}{2}$ to 2 per mille.

The Danish national bank ordinarily buys Au. at 2,480 crowns per kilo, less 1-4 per cent.

Gold and silver are bought and sold by the Danish mark of 8 unsers or 16 lods or 256 orts, equal to 235.294 grammes or 3,631.139 grains troy. The above is the monetary system of Faroe Islands, Greenland, Iceland, St. Croix, St. John and St. Thomas.

The Swedish skalpund of 100 ort equals .937 pounds avoirdupois. The metric system is obligatory in Norway and Sweden. In Denmark the pund is equal to 1,000 kvint, 100 ort or 1.1023 pounds avoirdupois; the centner is equal to 110.23 pounds av.

HOLLAND.

Gold standard. The standard money unit is the florin, otherwise known as the guilder; 100 cents is equal to 1 florin. The standard gold coin is the gold 10-florin piece, weighing 6.720 grammes .900 fine and thus containing 6.048 grammes of Au.

A 5-florin gold piece is also coined, and silver token, $2\frac{1}{2}$, 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, and $\frac{1}{16}$ florin pieces, and bronze $\frac{1}{2}$, 1, and $2\frac{1}{2}$ cents. This is the currency of the Dutch possessions of Guiana and Curacoa, of Java and all the Dutch East

Indies and colonies generally. In Holland the metric system is general though sometimes with slight modifications. A florin is taken officially in the U. S. at \$0.402, in England at 1s. 8d., or 12 guilders to the pound.

The $2\frac{1}{2}$ gulden or guilder or florin is called rijksdaalder, $\frac{1}{4}$ guilder kwartje, $\frac{1}{16}$ guilder dubbeltje, and $\frac{1}{32}$ stuivertje.

RUSSIA.

The Bank of Russia acts in double capacity, of state bank and of commercial bank, and has 108 branches, and silver currency has at times been "depreciated," or below par. In 1897 she began the coinage of pieces worth not 10 but 15 silver roubles. The recoinage of gold in 1897 was 165,889,550 roubles, 165,242,140 roubles of this was of old Russian gold coin. The rouble is taken officially in England at 9.47 roubles to the pound sterling. As the rouble is worth 2s. $1\frac{1}{16}$ d., it leaves about 2 pence per pound in favor of the British account. At the U. S. custom house the rouble is tariffed at \$0.515 and the Russian imperial at \$7.718, which is about 6 cents under its true value.

The above are calculations for the true modern rouble of to-day, in fact the *rouble*, but this is not the same as the rouble of a few years ago.

The gold coins of Russia are the imperial and half imperial of 10 and 5 roubles. The half imperial weighs 6.544041 grammes, $\frac{11}{16}$ fine, containing 5.998704 grammes of fine gold. Its value in paper roubles for the year 1896 was settled at 7.72 roubles, and 15.45 roubles for the imperial. The above is the old imperial

which is going out of vogue and will be eventually retired altogether.

The New Imperial weighs 12.902 grammes, .900 fine, and consequently contains 11.6118 grains of fine gold. Its value was settled by the Ministry of Finance for the year 1896 at 15 roubles for the imperial, and 7.50 roubles for the half imperial. This was at par or at the nominal value of the silver rouble.

(The ratio between gold and currency above is apparently 1 1-2, for the above pieces are marked 10 and 5 rouble pieces, but they are really 15 and 7.5 roubles of the new system.)

According to new laws of Jan. 3 (15) and Aug. 2 (Sept. 10), 1897, new gold coins of exactly the same weight, value, and dimension as the above will henceforward be coined *bearing the inscription* 15 roubles and 7.5 roubles on the imperial and half imperial, respectively, and 5 roubles on a new gold coin of the same proportion, and paper money can at any time be exchanged at its nominal value against these coins. That is, Russia as regards these coins has come to a "specie basis" like the U. S.

It will be seen that 15 roubles of the new coinage is not quite so much gold as 10 roubles of the old coinage, although the coins are called imperials.

It amounts to the fact that Russia has changed her rouble in 1897. It is now positively the $\frac{1}{15}$ of her new imperial. All these things have tended to confuse the subject very much. Within a short time Russia will have retired all her old gold coinage and her wrongly marked imperials and confusion will disappear.

It is only recently (1897) that Russia finally decided

to adopt the gold standard, a serious mistake on her part for otherwise she would have been in better touch with the Chinese trade. A promise of the silver standard with a strong backing from Russia would tempt the inhabitants of British India to revolt, for these starving people are taxed to death to pay the interest on a British *haut finance* gold debt. If Russia had directly and unmistakably adopted a silver money she would be a far more dangerous rival to British interests in the far east than she now is. It probably would have made her invincible in Asia.

There is also a new silver coinage in Russia. The old silver rouble weighed 20.7315 grammes, .86806 fine, and the new silver rouble weighs 19.9957 grammes, .900 fine. Besides the silver rouble there are legal tender notes of 100, 25, 10, 5, 3, and 1 rouble.

1 pound is equal to 96 zolotnik, or 32 lot, or .90283 lbs. avoirdupois.

1 pood is equal to 40 pounds, about 36 pounds avoirdupois.

63 poods equal 1 ton.

GERMAN EMPIRE.

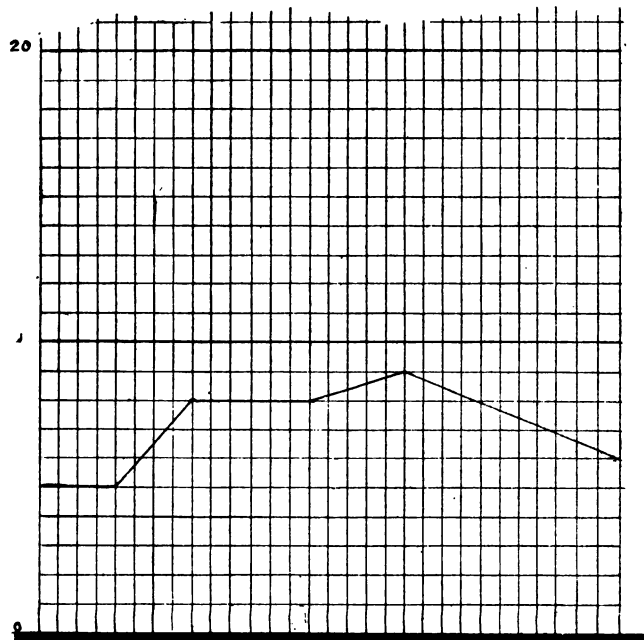
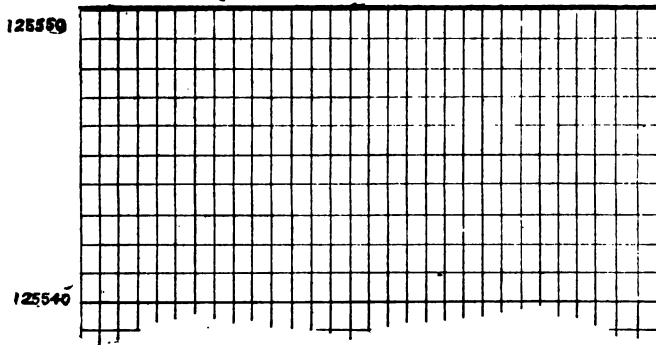
Money, gold, .900 Au. and .100 Cu. The unit of money is the mark of 100 pfennige, weighing 0.3982475 grammes and containing .3584205 grammes of pure gold or Au. Gold coins are 20, 10 and 5 mark pieces, called respectively, doppel krone, krone, and halb krone. The 20-mark piece weighs 7.96495 grammes, .900 fine, and contains, consequently, 7.16846 grammes of Au. The mark is taken by the treasury in England

at 11 $\frac{1}{4}$ d., or 20.43 marks to the pound sterling, and by the U. S. Treasury at \$0.238.

Silver coins are 5, 2, and 1 mark, and .50 and 20 pfennige pieces.

Nickel coins are 10 and 5 pfennige and there are bronze coins for smaller denominations. Old thalers are still legal tender, but other silver only up to 20 marks. The thaler is 3 marks. The metric system of weights and measures obtains in Germany. A 20-mark piece weighs 122.918 grains, an American \$5 piece weighs 129 grains.

Since the formation of the German Empire the term mark has been applied to the standard unit of the imperial monetary system, the value being fixed by the enactment that 139.5 10-mark pieces or 69.75 20-mark pieces shall be coined from 1 German or Zollverein (customs) pound or pfund (being 500 grammes or a half kilogram) of fine gold or Au., or what is more to the point, 125.55 10-mark pieces are coined from 1 pfund of standard gold, or there are 1,255.5 marks in a pfund of German money. At 1 mark per pfund 1,255.5 pfunds of anything could be bought for 1 pfund of German money or such is the ratio and relative value at that price; at 1 pfennige 125,550 pfunds could be bought, which is the ratio at that price and from here a table of relative value for all prices in pfenniges per pfund could be easily constructed. A mark has the weight of \$0.238213 of the money of the U. S. Coinage charge is 3 marks per pfund of pure gold. Tolerance, 2.5 mille on 20 and 10-mark pieces and 4 mille on 5-mark pieces, gold and silver sold by the kilog of pure metal.



This illustrates German prices (money included) in pfenniges per pfund.

Graphic Representation of German Money.

As there are 125,550 pfenniges in a pfund of German money, we have in the accompanying diagram placed the price of a pfund of German money at the height 125,550 above the zero level, so that the height of each little quadrangle represents 1 pfennige per pfund, each perpendicular line represents some time, say 12 M., in each day, and in this diagram there are 31 of these, representing a month of 31 days. German money would be represented by the horizontal level line at the height 125,550 for the whole month, or forever; for the price of German (or any other) money never changes, and German money is distinguished by the heavy black line at the top of this particular diagram. We have also represented a commodity having the price of 5 pfenniges per pfund on the 1st to the 5th, rising to 8 from the 9th to the 15th, rising to 9 on the 20th and falling to 6 pfenniges per pfund on the 31st.

FINLAND.

The money is gold .900 Au., the money unit is the markka of 100 penni of exactly the weight and composition as the franc.

Gold coins are 20 and 10 markka pieces. There are silver token coins for 2, 1, $\frac{1}{2}$, and $\frac{1}{4}$ markka. Copper coins are 10, 5, and 1 penni pieces.

The paper currency is exchangeable at par against gold.

THE BRITISH ISLES.

The standard money is gold, $\frac{11}{16}$ Au., $\frac{1}{16}$ Cu. The pound sterling weighing 123.274 grains or 7.9881

grammes and therefore containing 113.001 grains or 7.3224 grammes of Au., is the money unit. When coined this piece is usually called a sovereign.

4 farthings 1 penny, 12 pence 1 shilling, 20 shillings 1 pound sterling or sovereign.

The silver token shilling weighs 87.27 grains, or 5.6552 grammes .925, or $\frac{37}{40}$ Ag., and thus contains 80.727 grains or 5.231 grammes of Ag. or pure silver. Bronze coins consist of a mixture of copper, tin, and zinc. Silver is legal tender up to 40 shillings, bronze up to 12 pence, but farthings only up to 6 pence. Beside the English shilling, is the English florin or 2-shilling piece and the English crown (a coin stamped with a crown), or 5-shilling piece, and the half crown or 2 1-2 shillings, the English 6 pence and 3 pence, and there are also of silver 4 pence, 2 pence, and 1 penny pieces, all of the same composition as the shilling and of proportional weight. Some of these are practically not in circulation but are used as "Maunday" or "Maundy" money—on Maundy Thursday, the day before good Friday, when it was formerly the custom for the kings or queens of England to wash the feet of as many poor men as they were years old, and afterwards give them meat and clothes. This ceremony is now obsolete but on Maundy Thursday the royal almoner (almsgiver) distributes to each of as many poor men and women as the sovereign is years old, certain silver coins, called Maundy money, consisting of a 4-penny piece, a 3-penny, a 2-penny, and a 1-penny piece each of silver. The name is derived from the anthem that was sung during the ceremony, which began with the words *mandatum novum* (a new commandment) John 13:34,

the idea being that the washing of the feet was a fulfilling of this command.

During the ceremony was sung the anthem "A new commandment I give unto you that ye love one another." As it began with the Latin word *mandatum*, the day was called Maundy Thursday.

(Lingard, "History and Antiquity of the A. S. Church.")

By supreme British law an ounce troy contains £3 17s. 10½d. of British standard gold, which is 11½ gold and 1½ copper.

Also by the same it is distinctly stated that 20 pounds of British standard gold shall be made into "nine hundred and thirty-four sovereigns and one-half sovereign."

20 pounds troy is just 240 ounces troy and as 240 pennies make a pound sterling, it may be seen that the two enactments are the same. What would be pennies in one case must be sovereigns in the other, or an ounce contains 934.5d. sterling, so that the two enactments are the same.

E. A. Nicholson, M. A., Trinity College, Dublin, in a book called "Our Coinage and Present Monetary System," says:—

"Since 1816 gold has been chosen as the standard of value in Great Britain, and much care is taken to secure a proper gold coinage. Any one may bring gold to the mint to be coined provided it be not less than ten thousand pounds in value, and that it has first been assayed by the mint assayer and obtained his certificate, and the mint is bound to return in coin to the last grain exactly the weight of the standard metal which it has received, without any charge being made to the bearer.

Since 1837 no private individuals have availed themselves of this privilege and the Bank of England alone sends gold to the mint to be coined. The bank buys gold with its own notes, but will buy none which has not been previously assayed at the expense of the seller, by one of the six assayers employed by itself. It gives £3 17s. 9d. per troy ounce for all the standard gold brought to it for sale, whatever be the quantity, reserving $1\frac{1}{2}$ d. on each ounce of £3 17s. $10\frac{1}{2}$ d., which is the exact legal price at the mint. [That is, the British Government of itself coins gold free of charge, but the company of the Bank of England have practically the monopoly of the offer of the gold to the mint through the 10,000 pound, and the select assayer rule, etc., and get a small commission amounting to 0.032 per cent, or about 1-3 of 1 per cent on the operation.—G. R.] Previous to purchasing, the bank requires bullion to be melted by one of certain firms, at present four in number. These melters run the gold into ingots or 'bank bars,' uniform in size, and each containing 200 troy ounces. Branded with distinctive marks and figures the bars are deposited at the bank bullion office, and if the triple assay by one of the bank's assayers shows them to contain not less than 21 out of 24 parts of fine gold they are purchased. The bank does not buy metals under 21 carats fine. What is called the mint price is merely a declaration of the weight of metal of a fixed purity which the law recognizes to be in our gold coin; it ought to be called the mint division (mint weight) rather than the mint price. For instance, 40 pounds troy of 22 carat gold is by law divided into 1,869 ingots of a certain shape, which we call sovereigns; whatever be the value of the gold, whether it rises or

whether it falls, the number of sovereigns into which this particular weight of standard gold is divided will remain the same and it makes no difference whether the royal mint which performs the division is at Sydney or in London."

The bank is not bound to return coin for bullion in less than 20 days.

The English reckon the fineness of gold and silver by "carats" (practically twenty-fourths). Pure gold is 24 carats fine, English coin gold is 22 carats or $\frac{22}{24}$ fine. When the word "carat" is used in the weight of gems it means 4 grains. A diamond of 4 carats is a diamond of 16 grains. However, the Turkish and Arabian karat or carat of 4 grains differs (being somewhat less) from an English or U. S. carat, as their grain differs from an English grain. So that a diamond in the east of 4 carats does not weigh what a diamond in the United States or England of 4 carats does. The Turkish karat is the same as the Arabian.

"*Sterling* O. E. sterlinge, starling, for easterling, low Latin esterlingus, probably from easterling, once the popular name for German traders in England, whose money was of the purest quality." (Webster's Dictionary.)

"Certain merchants of Norwaie and others, those partes called Ostomanni, or (as in our vulgar language we tearme them) easterlings because they lie east in respect of us." (Holinshed.)

"In the time of K. Richard the First, monie coined in the East partes of Germanie began to be of special request in England for the puritie thereof and was called Easterling Monie as all the inhabitants of those parts were called Easterlings and shortly some of that coun-

trie, skillful in mint manners and allaes (alloys), were sent into this realme to bring the coine to perfection, which since that time was called of them sterling for Easterling." (Camden.)

"A term applied to English money of account, signifying that it is of the fixed or standard national value" (composition). (Encyc. Dic.)

"Sterling" practically means English money as so many pounds shillings or pence sterling.

English money all over the world is considered to be of carefully protected quality. Uncoined gold of the proper purity to be coined into British gold coins is sterling gold. From this word are derived such expressions as "a man of sterling integrity," "a work of sterling merit," "sterling virtues," etc.

Guinea, Sovereign, Pound, and Shilling.

The guinea, a coin so called from the Guinea gold out of which it was first made, was proclaimed in 1663 to go for 20 shillings, but it never went for less than 21 shillings and has not been coined since the issue of sovereigns in 1817, when England adopted her present system of coinage or formally chose the standard, which act was followed by most dreadful "hard times" in the British Isles. The guinea was first coined in 1664 and originally bore the impression of an elephant. Its value varied considerably at different periods, but was latterly fixed at 21 shillings. It is still customary in Great Britain to estimate professional fees, honoraria of all kinds, complimentary subscriptions, prices of pictures, etc., in guineas; to give a physician three sovereigns and three shillings rather than three sovereigns

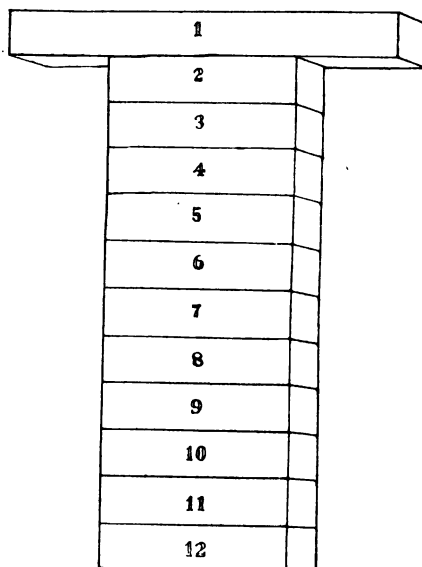
alone, or even three sovereigns and five shillings, is supposed to make the transaction differ from a mere mercantile one and thus veils the sordidness which is fancied to attach to pounds, shillings and pence. The sovereign is the English standard gold coin of 20 shillings or 1 pound sterling (1 pound sterling is the weight of standard gold, and sovereign the name of the same after being coined by the British mint). The name was first applied to a gold coin issued in the reign of Henry the Eighth, otherwise called the double royal, on which the king was represented in royal robes; the name disappeared after a few years and was revived as applicable to the gold pieces of to-day first issued in 1817. (Int. Encyc., et al.)

The name pound is derived from the fact that in the time of the conqueror one Tower pound of silver was coined into 240 silver pence, whence the tower penny-weight at that time was really the weight of a penny. Now an English silver shilling weighs $87\frac{3}{4}$ grains, or 66 shillings go to the troy pound of silver, $\frac{3}{4}$ Ag.

Hall Mark.

In England an official mark put upon articles of gold and silver as an evidence of genuineness, so called from Goldsmiths Hall in London, the seat of the Goldsmiths Company, by whom the stamping is legally regulated. It consists of various marks placed close together, as follows: (1) The mark indicating the standard (for silver of the new standard it is a figure of Britannia and a lion's head erased; "erased" in heraldry means torn off or jagged as distinct from "couped" or cut off smooth); (2) the mark of the assay town, as a crown for Sheffield, or an anchor for Birmingham; (3) a mark denoting that

the duty has been paid; (4) the date mark, consisting of a letter of the alphabet for each year, in series of differing styles or designs; (5) the maker's mark, usually two or more initial letters; (6) the workman's mark, which is not always present. (Cen. Dic.)



English and American Money Compared.

The accompanying diagram represents 12 bars of metal, all of *equal* weight. The top bar, marked 1, is copper and the rest are gold.

The specific gravity of gold is about 2.15 as great as that of copper, so that a copper bar of equal weight with a gold one should be about 2.15 as voluminous.

If we take all these 12 bars and melt them or boil them into bullion (French *bouillon*) we would have

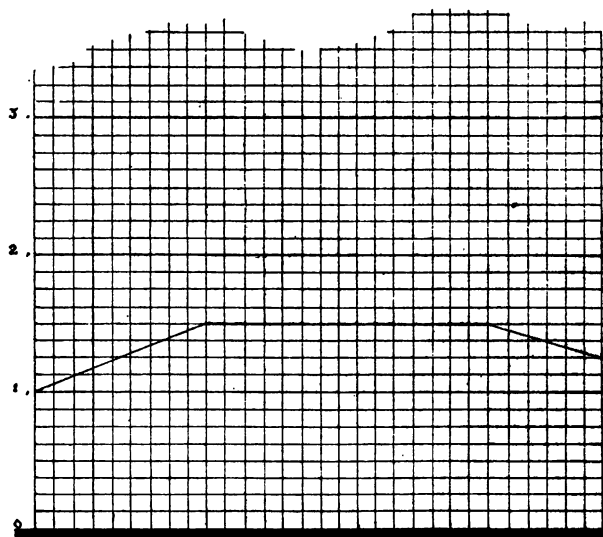
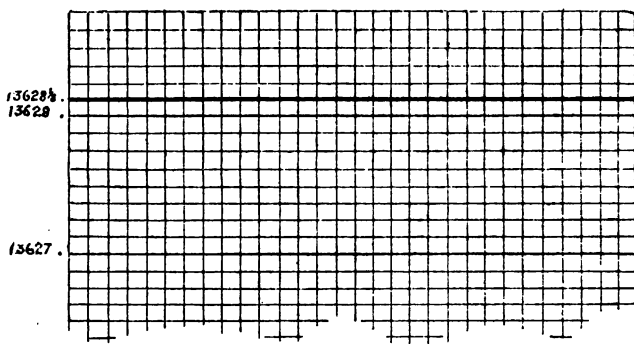
exactly the same thing in composition as English standard coin gold, sterling gold, or English money, and it would be $\frac{11}{12}$ Au. and $\frac{1}{12}$ Cu.

If, instead of taking all, we should take the first 10 bars from the top and proceed in the same manner, we would have bullion of the same composition as American "standard gold," U. S. gold coin, or U. S. money, which is exactly the same in composition as the money of France, Germany, and many other countries.

To 108 parts (equal parts by weight, as, for instance, avoirdupois pounds) of English money, add 2 parts of Cu. and boil to make 110 parts of American standard gold, the same in composition as American money. To 120 parts of American standard gold, add 24 parts of Au., or pure gold, to make 144 parts of sterling gold, the same thing in composition as English gold coin or English money. In every 60 parts of English money, there is 1 part more Au. than in 60 parts of American money. In 55 parts, as, for instance, pounds avoirdupois of American money, there is the same quantity of Au. that there is in 54 pounds avoirdupois of English money, which is 49.5 pounds Au., or in other words $\frac{1}{10}$ of 55 is the same as $\frac{1}{12}$ of 54. Bullion and "funds" mean about the same thing; *fundir* in Spanish means to melt; a smelter or a foundry is called a *fundicion*. Our word foundry means a place of melting or founding. A man in old times who had plenty of chunks of the right sort of junk, was well supplied with funds; the same is true yet.

Graphic Representation of British Money.

There are 13,628 1-8 pennies in a pound avoirdupois of British money. In the accompanying diagram these



Illustrating prices in England where $13,628\frac{1}{2}$ pence per avoirdupois pound is the invariable price of British money.

penny divisions are marked 1, 2, 3, up to 13,628, and 13,628½ is also marked, which is the straight line representing the price of British money, which of necessity must always bear that price in pennies per avoirdupois pound, and therefore is always level, and we have drawn it heavy in the diagram to distinguish it. The pennies are divided into eighths or half farthings, making each little rectangular space one-eighth of a penny or a half farthing high. The diagram represents one month of 31 days, see *Graphic Representation of American Money*. We have on the diagram represented a price of 1 penny per avoirdupois pound on the first day of the month, $1\frac{1}{4}$ on the fifth, $1\frac{1}{2}$ on the tenth continuous without fluctuating until the twenty-fifth and falling to $1\frac{1}{4}$ on the thirty-first. This gives the price of this (imaginary) commodity during this time, or it compares the value per avoirdupois pound of this commodity, with the value per avoirdupois pound of sterling money for the same time, showing that price in all things sold by weight is simply a statement of their relative value as compared with the relative value of money.

FRANCE.

Money is gold .900 Au. .100 Cu. The money unit is the gold franc weighing ten thirty-firsts, or $\frac{1}{31}$ of a gramme, and is not coined as a single piece.

The franc is tariffed by the British Government, at 9½d. or 25.225 francs to the pound sterling, and by the U. S. Treasury at \$0.193. Gold coins in common use are the 20 and 10-franc pieces. The 20-franc gold piece weighs 6.4516 grammes, .900 fine, and thus contains 5.80645 grammes of Au. Silver coins are 5, 2, 1,

and $\frac{1}{2}$ -franc pieces and 20-centime pieces. Bronze coins are 10, 5, 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ -centime pieces. There is "theoretically," as it is sometimes said, but in reality pretendedly or falsely, a double standard of value in France, the ratio being $15\frac{1}{2}$ to 1, which is the ratio by weight between the silver franc and the gold franc in French coinage. Of silver coins only 5-franc pieces are legal tender and of these the free coinage has been suspended since 1876. The present monetary convention between France, Belgium, Italy, Switzerland, and Greece is tacitly continued from year to year, but may be denounced by any of the contracting states, and if denounced will expire at the end of the year, which begins the first of January following the denunciation. According to its terms, the five contracting states have their gold and silver coins respectively of the same fineness, weight, diameter, and current value, and the allowance for wear and tear in each case is the same. The coinage of 5-franc pieces is temporarily suspended, and the issue of subsidiary silver is, with certain exceptions for special reasons, limited to 7 francs a head for the population of each state (but 6 francs for Greece). Each government in its public offices accepts payments in the silver 5-franc piece of each of the others, and in subsidiary silver to the amount of 100 francs for each payment. Each state engages to exchange the excess of its issue over its receipts of subsidiary silver for gold or 5-franc silver pieces, and at the termination of the convention each is bound to resume also its 5-franc silver pieces, and to pay in gold a sum equal to the nominal value of the coin resumed. (But see also under Italy.)

The following numbers, expressed in millions, show

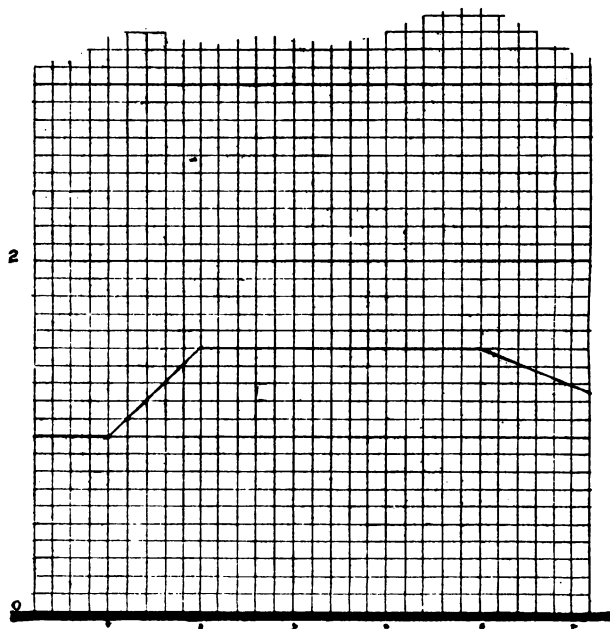
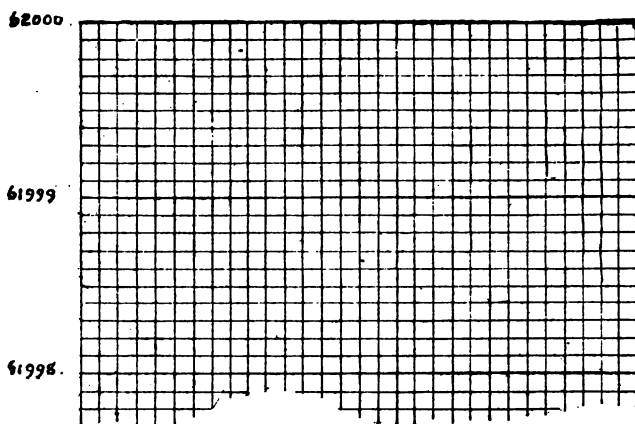
the total issues of token silver of the five states authorized by the convention of 1897: France, 394 francs; Italy, 232.4 lire; Belgium, 46.8 francs; Switzerland, 28 francs; Greece, 15 drachmas. This convention is called "The Latin Union."

As a franc is $\frac{1}{100}$ of a gramme, a kilo of French gold would be 3,100 francs, so that at 1 franc per kilo the ratio would be 3,100 between gold and anything at a franc a kilo; at 1 centime per kilo the ratio would be 310,000, and from this a table of relative value may be constructed.

One kilogram of gold $\frac{7}{8}$ fine is coined into 3,100 francs; one kilo of fine gold is used in making 3,444.49 francs. The "remedy" is a thousandth for weight and a five-hundredth for fineness on 20 and 10-franc pieces, and on 5-franc pieces a three-thousandth for weight and a five-hundredth for fineness. The mint buys gold bars of .900 fineness at 3,093.30 francs per kilo, making the mintage charge 6.70 francs per kilo.

In France in 1803 the legal relation of silver to gold was fixed at 15½ under bimetallism, and continued to 1876, when France demonetized silver, or the right of private individuals to have silver coined for them was taken away and only the 5-franc piece continued to be legal tender to all amounts, the others being legal tender up to 50 francs.

The word franc is derived from the Latin *Francus*, a Frank, one of the people who were called Franks. The coin at first bearing the Latin inscription *Fran-corum Rex*, king of the Franks, and is the unit of account in the monetary system of France or the unit weight for the money of France. The franc is divided into 10 *decimes*, 100 *centimes*; the denomination decime has fallen into popular disuse, but the old division into



This illustrates French prices of commodities (money included) in sous per kilo. The price of French money is always 62,000 sous per kilo.

twenty sous of five centimes each is still in common use. The 20-franc pieces are commonly but not legally called Napoleons. The copper coins are of ten centimes, stamped *dix centimes* but called 2 sous, 5 centimes called 1 sou, and a very pretty but rather useless little piece of 1 centime, which is hardly seen except at the post-offices. In the first contrast of the Latin Union a franc was called .3225806 grammes, which is the same as $\frac{1}{31}$ of a gramme.

Graphic Representation of French Money.

We have shown that in a kilogram of French money there are 3,100 francs or 310,000 centimes, but as among the people in common conversation the denomination decime is in disuse, and they are accustomed in the markets and everywhere to using the word sou, a sou being 5 centimes, or about 1 American cent, or there are 20 sous to the franc or 62,000 sous to the kilo, therefore, in our table French money is divided into sous, and we have divided the sous into tenths and the diagram is marked 1, 2, 3, etc., up to 62,000 sous, which is the straight level line representing the price of French money which is always 62,000 sous per kilogram. (See the chapter on Graphic Representation of United States Money.) In the accompanying diagram we have started at the beginning of the month with a commodity selling at 1 sou per kilo from the 1st to the 5th, rising to $1\frac{1}{2}$ sous per kilo on the 10th, continuing at that price to the 25th and falling to $1\frac{1}{4}$ sous on the 31st.

The legal monetary unit of France before the introduction of the present franc, in 1795, was the livre tournois (of Tours). It was slightly less in value than

the coin by which it was superseded, 81 livres being equal to 80 francs.

ITALY.

The money weights and measures are the same as those of France. The lire and centesimo are the same in weight and quality as the franc and centime. By a protocol of March 15, 1898, of the convention of the Latin Union, Italy is freed from the obligation, created by the convention of 1885, to take back its fractional coins within a year following the dissolution of the union, on condition of forbidding the exportation of such coins while the union continues, and undertaking not to change its present system with respect to such coins during five years following the dissolution of the union. A law of February 16 and July 19 authorize the issue of 2-lire and 1-lire silver coins on the withdrawal of buoni di cassa (one and two-lire notes guaranteed by silver in the treasury) to a corresponding amount.

BELGIUM.

Money, etc., same as France; franc called a pranc.

GREECE.

Same as France. Drachma of 100 lepta; 100 new drachma equal 112 old drachma.

In September, 1898, it was decided to introduce the metric system as regards measures of length, weight, and capacity. The change from the old system is to be gradual. The old system is:—

The Oke = 2.80 lbs. av.

Cantar = 123.20 “ “

Livre = 1.05 “ “

SPAIN.

Gold standard. The peseta is exactly the same in weight and composition as the franc; it is divided into 100 centesimos or centimos.

The common gold coins are 20, 10, and 5-peseta pieces. Silver coins are 5-peseta and single-peseta pieces. Both gold and silver coins correspond exactly in weight and fineness to the French coinage. Popularly the 5-peseta piece is sometimes called a *peso*.

In January, 1859, the metric system was introduced, but the old denominations are largely used.

Quintal, 101.4 lbs. av.; libra, 1.014 lbs. av. The arroba, 25 libras, and for wine $3\frac{1}{2}$ imperial gallons; fanega, $1\frac{1}{2}$ imperial bushels.

SWITZERLAND.

Money unit the franc of 10 batzen and 100 rappen or centimes, exactly the same as the French franc in weight and composition. Switzerland belongs to the Latin Union. The pfund of 500 grammes is the chief unit of weight. The centner of 100 pfund or 50 kilograms is about 110.2 pounds av. The people usually divide the pfund into halves and quarters, named halbpfund and viertelpfund.

BULGARIA.

Coinage same as France; the leva corresponds to the franc, and is divided into 100 stotinki.

There are a few Bulgarian coins of 100, 40, 20, and 10 leva (francs) but the gold circulation is supplied by foreign 10 and 20-franc pieces.

Eastern Rumelia, now called Southern Bulgaria, is

governed by the prince of Bulgaria, and is practically annexed,—has same coinage.

Bulgaria is a state practically free though nominally tributary to Turkey.

ROUMANIA.

The decimal system was introduced in 1876. The unit of money is the leu, plural lei, the same as the franc in composition and weight, and throughout the monetary system is like that of France. The metric system has been introduced, but Turkish weights are used to some extent by the people.

SERVIA.

The system of money and coinage corresponds to the French.

The dinar of 100 paras is the same in weight as the French franc.

Gold coins of 10 and 20 dinar are in circulation.

The 20-dinar piece is called a Milan d'or, and there are silver 5, 2, 1, and half-dinar coins and smaller denominations of nickel and bronze.

This system of coinage was adopted in 1875, and the metric system of weights and measures has been in practical use since 1883.

PORTUGAL.

The standard is gold, $\frac{1}{10}$ or .916637 fine. The money unit is the milreis, weighing gross 1.7735 grammes or 27.3965 grains, containing of pure gold 1.62571 grammes or 25.0885 grains.

The milreis is received at the United States custom

house at \$1.08. Larger sums are expressed in *contos* of 1,000 milreis. Gold coins are 10, 5, 2, and 1-milreis pieces, called *coroa*, *meia coroa*, etc. *Coroa* (crown).

Silver coins are 10, 5, 2, 1, and half-testoon (*testao*) pieces, or 1,000, 500, 200, 100, and 50-reis pieces. The 5-testoon (or 500-reis) pieces weigh 12.5 grammes, 11-12 fine, and contain 11.4580 grammes fine silver. Bronze coins are 40, 20, 10, and 5 reis. The English sovereign is legal tender for 4.5 reis. In the present derangement of the finances, Bank of Portugal paper is chiefly in circulation. The metric system of weights and measures is the legal standard. 8,000 reis is called a *peca*, and 4,000 a *meia peca*. The name *peca* is a relic of the coinage of old Roman times. The coinage charge on gold is 1 milreis per kilogram, which is a trifle more than one-fifth per cent. The mint buys gold $\frac{1}{4}$ fine at 563.856 milreis per kilogram, which is milreis 615.115 per kilogram of fine gold. The metric system is the legal standard, though the libra of 1.012 av. pounds or 500 kilos is in use. Milreis means 1,000 reis; *testao*, 100 reis.

AUSTRIA-HUNGARY.

By law of August 2, 1892, the monetary system of Austria-Hungary was reformed on a gold basis .900 fine gold, .100 copper. The money unit is the *krone* or *krona* (crown), weighing .33875335 grammes, and containing .304878015 grammes fine gold.

The 20-crown piece weighs 6.77067 grammes, and thus contains 6.09756 grammes of fine gold; besides this are the 10-crown piece, which is one-half of the above, and also the single ducat piece of the old coinage, which is 9 crowns 60 heller (filler in Hungarian).

The 20-crown piece and 10-crown piece are officially rated in England at 16s. 8d. and 8s. 4d., and the ducat at 8s. The crown is officially rated in the United States at \$.203. The old gold coinage in the United States is rated 4 florins, \$1.929; 8 florins, \$3.858; ducat, \$2.287; and four ducats, \$9.149.

Gold, present system, is rated at 20 crowns, \$4.052, and 10 crowns, \$2.026.

The crown is divided into 100 heller (filler).

In the silver coinage the old gulden florin (or forint) is worth two of the new silver crowns, and the 20-heller (filler) piece is worth 10 kreutzer (krajczar) of the old coinage, or about 2d., or United States 4 cents. The 10-filler piece is worth 5 kreutzer of old coinage, about 2 cents. Of bronze are the 2-filler (or 2-heller) piece, being 1 kreutzer, about $\frac{2}{3}$ of a cent; and the single heller about $\frac{1}{3}$ of a cent.

Silver gulden or florins continue to be legal tender to any amount. Silver crown pieces are accepted to any amount at government offices, but in general circulation they are legal tender only up to 50 crowns. The notes of the state bank are legal tender.

The metric system is now obligatory in Austria-Hungary. The old weights were the centner of 100 pfund, equal to 56.06 kilo or 123.5 lbs. av.

MONTENEGRO.

Montenegro has no coinage of its own—Austrian paper principally current. Turkish silver is also current, and French and English gold circulates freely at a rate of exchange fixed from time to time by the government. There is no bank of any kind in the country.

TURKEY.

Gold standard 11-12 or .916667 fine. The money unit is the Turkish pound or lira, and 40 paras make 1 piastre, 100 piastres 1 pound or lira, which weighs 7.216 grammes or 111.3598 grains, containing pure gold 6.6147 grammes or 102.0804 grains.

The Turkish pound, lira, or gold medjidie, is taken in England at 18s. 0.064 pence, and the piastre at 2.16 pence. In the United States customs the piastre is taken at \$0.044; lira, \$4.40. (This piastre must not be confounded with the French name for a peso of Spain or America, and a name often popularly given to their own 5-franc piece.)

Large accounts are frequently, as in budget estimates, set down in "purses" of 500 medjidie piastres, or 5 Turkish liras.

Common measures are the oke of 400 Turkish drams, or 2.8326 lbs. av.; 44 okes make 1 kantar or kintal, 125 lbs. av.

In 1882 the Turkish weights were assimilated to the metric system, but under old names leading to much confusion. An oke equals 1 kilogram; batman 10 kilograms; cantar, 100 kilograms; tcheki, 1,000 kilograms. In 1889 the metric system of weights was made obligatory for cereals, and in 1892 the metric weights were decreed generally obligatory, but the decree is not yet enforced.

The medjidie is one, the zarin one-half, the tyeirek one-fourth pound. These are gold coins. Silver coins are 20, 10, 5, 2.5, 2, and 1 piastre. Bronze coins are 10, 5, 1, $\frac{1}{2}$, and $\frac{1}{4}$ para. The Turkish grain is .77224 troy grains; 4 grains make 1 carat; 16 carats, 1 dram; 400 drams, 1 oke.

ASIA.*SIBERIA.*

Same as Russia.

MANCHURIA AND MONGOLIA.

Same as China.

KOREA.

The legal currency is the copper cash, together with the newly-minted silver dollar, silver 20-cent piece, nickel 5-cent, copper 5-cash, brass 1-cash. The amount of the new coinage in circulation is, however, totally inadequate, and is supplemented by the Japanese yen, which has recently become practically the currency of the country. The adoption of a gold standard in Japan has caused much confusion in Korea. (Stateman's Y. B.)

JAPAN.

The present monetary law came into force in October, 1897, by which the gold standard .900 gold, .100 copper, was adopted. The money unit is the yen, weighing $\frac{1}{8}$ of a gramme or .83333 grammes of gold, and containing 0.75 gramme or $\frac{3}{4}$ of a gramme of pure gold and $\frac{1}{4}$ of a gram pure copper.

Twelve hundred yen are coined from one kilo of standard .900 fine gold, and the gold pieces are 20, 10, and 5 yen. The silver pieces are 50, 20, and 10 sen, nickel, a 5 sen, and bronze 1 and $\frac{1}{2}$ sen. The silver coins are .800 fine. The gold coins *formerly issued*, 20, 10, 5, 2, and 1 yen, are used at *double* their face value.

The 1-yen silver coin formerly issued is withdrawn. The old silver 5-sen and copper 2, 1, and $\frac{1}{2}$ -sen pieces

are used at their nominal or face rating, that is, as modern sens. Paper currency of various denominations is in general use, and is now at par with gold. The metric system is adopted, and the metre equals 3.3 shaku; 1 gram equals $\frac{1}{4}$ or 0.26667 mommee.

CHINA.

The sole official coinage of China is the copper cash of which 1,600 to 1,700 make 1 haikwan or customs tael, which is a weight of pure silver of $1\frac{1}{2}$ avoirdupois ounces, or 583 $\frac{1}{2}$ grains is equal to 1.214 troy ounces, and which is the fixed or only true liang or tael whose weight is fixed all over the empire, and is probably in truth the money unit. It was worth in October, 1898, according to the official declaration of the United States, \$0.718; of course it varies with the price of silver. Pure silver is, in reality, the money of China.

The copper purchasable for a tael of silver in the latter part of 1898 sufficient to make token coins representing a tael of silver cost the government 1.354 taels, and this appreciation of copper has not only restricted coinage, but led to the melting down of copper coin.

The liang or tael varies in different places, but the haikwan or customs tael does not vary, being always $1\frac{1}{2}$ ounces avoirdupois of pure silver or 12 taels pure silver to the avoirdupois pound. (This would not be a bad money unit for the silver men of the west to arbitrarily adopt in order to break the gold monopolistic standard.)

This invariability of the customs or treasury tael of the Chinese Government may have been brought about because the head of the Imperial Customs Department

is a Briton, Sir Robert Hart, and under him is a large staff of European, American, and Chinese subordinates, who collect the revenue of the Chinese foreign trade and manage the lighthouses, etc., on the coast of China. Besides the Haikwan or customs tael, is the Shanghai tael, the Tientsin tael, and the Chefoo tael, tarified by the United States in 1898 at \$0.645, \$0.684, and \$0.675 respectively. Sycee silver or silver in ingots or small lumps bearing the stamp of the office that issues it and used it as currency is much in use in coinage from hand to hand and also Mexican dollars, etc. Large payments are made by weight of silver bullion. By an imperial decree issued during 1890, the silver dollars coined at the new Canton Mint are made current all over the empire. We do not know the weight and fineness of this coin, but it is probably made with the idea of driving the Mexican dollar from the trade. Foreign coins are looked upon as bullion, and usually taken by weight except at the treaty ports.

10 sze = 1 hu.

10 hu = 1 hao.

10 hao = 1 li (nominal cash).

10 li = 1 fun (candaren).

10 fun = 1 tsien (mace).

10 tsien = 1 liang (tael).

16 liang = 1 kin (catty).

100 kin = 1 tan (picul).

1 liang = $1\frac{1}{3}$ oz. av.

12 liang = 1 pound av.

16 liang = 1 catty, $1\frac{1}{3}$ lbs. av.

100 catty = $133\frac{1}{3}$ lbs. av.

1 catty = $1\frac{1}{3}$ California cental.

16 liang = 1 catty, $1\frac{1}{3}$ lbs. av.

TURKESTAN.

Turkestan is a dependency of the Russian Empire, and East Turkestan of China.

TIBET.

Dependency of China.

ARABIA.

Same as Turkey.

PERSIA.

The monetary unit is the kran, a silver coin formerly 28 nakhods (88 grains), then reduced to 26 nakhods (77 grains), now weighing only 24 nakhods (71 grains). The proportion of silver was before the new coinage commenced (1877), 92 to 95 per cent. It was then for some time 90 per cent; and is now about 89½ per cent. The value of the kran has, in consequence, much decreased. In 1874 a kran had about the value of a franc, 25 being equal to 1 pound sterling. In consequence of the fall in the price of silver, the value of a kran is at present (September, 1899) 4.8 pence, a pound sterling bill on London being worth 50 krans, which was also the average exchange for 1898-99.

The silver coins are the 10-pul, or 5-shahi piece, the 10-shahi, and the 20-shahi (which is one kran), the 2-kran, and the 5-kran piece, or the 40-shahi and the 100-shahi.

The copper coins are the 1-pul, 2-pul or 1-shahi, the 4-pul or 2-shahi, and the 4-shahi or 1-abassi piece.

In consequence of an excess of coinage by a former mint master copper coinage has greatly fluctuated in

value since 1896, and is now circulating at less than its price as copper (owing to appreciation in the value of copper and depreciation in the value of silver), viz., 80 to 83 shahis (weighing about $\frac{1}{4}$ pound) to one silver kran worth $4\frac{1}{2}$ d. or about 10 cents.

The government has now decided to introduce a nickel coinage instead.

Gold coins are $\frac{1}{4}$, $\frac{1}{2}$, 1, 2, 5, and 10-toman pieces. The toman is nominally worth 10 krans. Very few gold pieces are in circulation, and a gold toman is at present worth 16.50 krans or 6s. $7\frac{1}{2}$ d.

Accounts are reckoned in dinars, an imaginary coin, the ten-thousandth part of a toman of 10 krans. A kran, therefore, is 1,000 dinars: 1 shahi is 50 dinars. (Latin *denarius*, from which comes the d of the English penny, Spanish dinero meaning ready money cash, or caja, or money in the box. Cash, from French, *caisse*, *cache*, etc., Spanish, *caja*, a box, etc., originally meant money ready, or on hand, or in the box, and so used in commercial accounts. Cash and case are lingual brothers.

The unit of weight is the miskal (71 grains); 16 miskals make a sir, and 5 sir an abassi, also called wak-keh and kervankeh; 4 gandum or 0.74 grain make 1 nakhod; 2.96 grains and 24 nakhod make 1 miskal, 71 grains.

Most articles are bought and sold by a weight called a batman or man, and there are different mans in vogue.

AFGHANISTAN.

The rupee appears to be usually current. The ameer's mint at Kabul (Kabul is also the name for Northern Afghanistan) is now under the supervision of

an Englishman. According to official reports, the smallest silver coin yet struck has been the *kran*, of the value of half the Kabul rupee (it is not stated what the Kabul rupee is, and the writer does not know), but in future there will be a smaller coin equivalent to a three-pence. In addition to this there will be a gold coin, the same as a sovereign, and new silver pieces equal to the crown and half-crown respectively. Besides the small copper pice at present coined, of which 72 are reckoned as equal to one Kabul rupee, a large bronze coin of the size of a crown will be struck of the nominal value of about fivepence.

BALUCHISTAN.

Same as India.

NIPAL.

The silver mohur is valued at 6 annas and 8 pies of British Indian currency. Copper pice, of which 50 go to a silver mohur, are also coined. The Indian rupee passes current throughout Nipal.

BURMA.

Same as India.

SIAM.

The legal money of Siam is the tical, a silver coin weighing 236 grains .910 fine. Other silver coins from the Siamese mint now current are the *salung* and the *fuang*, being respectively $\frac{1}{4}$ and $\frac{1}{8}$ tical. Dollars are accepted in payment at the rate of 3 dollars for 5 ticals.

The tical or bat is 64 atts, or 60 cents of a Mexican dollar.

Four ticals make 1 tamlung, and 80 ticals make 1 catty; 1 chang is $2\frac{3}{4}$ pounds avoirdupois, and 50 chang make 1 hap of $133\frac{1}{4}$ pounds avoirdupois; 1 chang is two Chinese cattys of weight.

ANAM.

Same as Indo China (French).

INDO CHINA.

Under this designation are the French dependencies of Cochin China, Tonking Anam, and Cambodia, no clear information about the money, but suppose that the French gold system will be imposed upon the country in time. The accounts of these countries are reported in piasters; whether this is the five-franc piece or the Mexican dollar or some special French silver coin we do not know, but presume it must be on a silver "basis" and is the Mexican dollar, as its coinage never has been mentioned publicly as has been that of India in this country.

INDIA.

"From 1835 to June 26, 1893, the standard of value was the silver rupee (containing 165 grains of fine silver and 15 grains of alloy), which was freely coined for the public. Down to 1891-92 gold was also coined in small quantities in the form of mohurs."

"In 1892-93 the gold price of silver fell below 39 pence per ounce, and the exchange value of the rupee fell below 1s. 3d. or 15d."

"In view of the increasing embarrassment of the finances, and the inconveniences and impediment to

trade, caused by the fluctuations in the rate of exchange between India and England, a committee under the presidency of the lord chancellor, was appointed to consider what remedial measures should be adopted."

"In accordance with the recommendation of this committee, a bill providing for the closing of the Indian mints to the unrestricted coinage of silver for the public was introduced in the legislative council of the governor-general, on June 26, 1893, and passed into law on the same day as Act VIII, of 1893. (How much more violent this than the Demonetization Act of the United States!) Notifications were issued simultaneously providing: (1) For the receipt of gold coin and gold bullion at the mint in exchange for rupees at a ratio of 1s. 4d. or 16d. per rupee. (2) For the receipt of sovereigns and half sovereigns of current *weight* at treasuries in payment of government dues at the rate of 15 rupees per sovereign; and (3) for the issue of currency notes in Calcutta and Bombay in exchange for gold coin or gold bullion at the rate of 1 rupee for 16d. By a notification of the 11th of September, 1897, sovereigns and half-sovereigns of current weight are also received at the reserve treasuries, and rupees are issued in exchange at the rate of 15 rupees per sovereign." (These last two regulations put the rupee paper and silver of India upon a gold basis, and is practically equivalent to coinage of the gold received, for the notes circulate in lieu of the gold held by the treasury similarly to the gold notes of the United States, except that in the United States gold coin is held for the payment of gold notes, and in India uncoined bullion gold and also English coined gold is held.)

"Proposals were made by the government of India in

March, 1898, for further steps for the establishment of a gold standard for India on the basis of 16d. per rupee. These proposals were referred by the Secretary of State for India to a committee in London. The committee recommended that sovereigns should be declared a legal tender in India and the Indian mint opened to the free coinage of gold." [This shameless and high-handed job was completed without consulting, and contrary to, the wishes and interests of the "common people" of India.]

"The proposals of the committee were adopted by the government of India, who, by an act (XXII, of 1899), passed on the 15th of September, declared the sovereign legal tender (the standard money unit). Measures are in progress for the coinage of gold in India."

The money and weights of India with the British equivalents are:—

1 pie = $\frac{1}{3}$ farthing.

3 pie 1 pice = 1 farthing.

12 pie 4 pice = 1 anna or penny.

16 annas = 1 rupee.

1 rupee = 1s. 4d. or 16d.

15 rupees = 1 pound sterling.

The silver rupee weighs 1 tola, or 180 grains $\frac{11}{16}$ fine, a piece somewhat smaller than our silver half dollar.

The sum of 100,000 rupees is called a "lac," and 10,000,000, a "crore" of rupees.

The old gold mohur or old 15-rupee piece of India contained upon issue 165 grains of pure gold and weighed 1 tola or 180 grains, and there were 2, $\frac{2}{3}$, and $\frac{1}{3}$ mohur pieces in same proportion. The old ratio

between silver and gold in India was therefore 15 to 1.

The British sovereign contains 113 grains of pure gold. So that the rupee of old times is not the rupee of to-day. The rupee of to-day is 16d. sterling. These old mohurs are being retired or taken in for the re-coinage and within a few years will practically have disappeared.

PHILIPPINE ISLANDS.

The coin in use is the Mexican dollar with locally-coined fractional money. The importation of foreign money is illegal, but that of Mexican dollars is permitted. There are three banks in the islands, one of them, the Banco Español Filipino, having a note circulation of \$2,500,000. Steps are under consideration by our gold "financier" Secretary of the Treasury to impose the high-toned-robber monetary system of the United States upon the islands. And, really, as the sovereignty has passed to us, our despotic monetary law must go with it, at least under any strict legal construction of supreme general law or what is called "constitutionality." But the essential essence of the Constitution is to general justice, and it may be laid down as a general principle that the American Constitution "can do no wrong," and the moment any construction is shown to be unjust or against public policy or public morals, then that construction must be regarded as erroneous.

The Government of the United States has recognized a silver money in its own dominions, as in the case of the treaty or agreement with the sultan of the Zulu Archipelago, and in other cases.

AFRICA.*MOROCCO.*

Spanish 5-peseta pieces, equal to the 5-franc piece, are current, and also Moorish pieces minted for the government in France. The money is, therefore, practically the same as the French.

ALGERIA.

Standards all French.

TUNIS.

French money.

TRIPOLI.

Unit of money the silver mahbub(?).

EGYPT.

By decree of November 14, 1885 (7 Seffer, 1303), the monetary unit of Egypt is the gold standard pound of 100 piastres, which weighs 8.5 grammes .875 Au., and therefore contains 7.4375 grammes of Au. Its equivalent in sterling is £1 os. 6½d. The 10-piastre silver piece weighs 12.5 grammes, .900 Ag. (same as the U. S. 50 cents), and contains 11.25 grammes Ag. Coins in circulation are the pound of 100 piastres of gold, and the 20, 10, 5, 2, and 1 piastres of silver. For lower denominations, nickel and bronze. Egyptian money is coined at the Berlin mint. 100-piastre piece is tariffed United States \$4.943; Egyptian piastre, therefore, is \$0.04943.

LIBERIA.

Money chiefly in use is British, but accounts are kept in American dollars and cents; weights and measures mostly British.

ABYSSINIA.

The current coin of Abyssinia is the Maria Theresa dollar, but a new coinage has been put in circulation with the Menelik dollar for the standard coin. This new coin, by law equal to the Maria Theresa dollar, circulates in the capital and at Harrar at the same value as the Maria Theresa dollar. The bullion is nearly the same. The Abyssinian ounce weighs 430 grains, the weight of the Maria Theresa dollar. (Statesman's Y. B.)

The Maria Theresa dollar, according to the Dictionary of Political Economy, is an Austrian silver trade coin first struck in 1775. Since 1780, however, these coins have always been issued bearing the date 1780 and the effigy of the Empress Maria Theresa. They are coined for use in the Levant and Asiatic trade, weigh 433.15 grains, fineness .8333 Ag., or $\frac{1}{3}$ Ag., and, therefore, contain 360.958 grains Ag. This coin has no subdivision pieces. It will continue to be coined under the new Austrian currency arrangements.

OTHER TERRITORIES.

Have coins and money, as in Europe, according to the respective "spheres of influence." However, the English system encroaches to a great extent in Portuguese territory back of Lorenzo Marquez on Delagoa Bay.

AMERICA.*UNITED STATES.*

See history of United States money and also the chapter on weight. The money is gold .900 Au., .100 Cu. The money unit is the dollar of 25.8 grains, 23.22 grains Au., or by the metric system it corresponds to 1.671 grammes, 1.50464 grammes Au.

CANADA.

The money unit is the United States dollar of 100 cents. The value of the money of the United Kingdom is fixed as follows: The sovereign, at \$4.86; the crown, at \$1.20; and the half crown, florin, and sixpence proportionately. Canada has no gold coin of its own, but the English sovereign and the United States 2, 1, $\frac{1}{2}$, and $\frac{1}{4}$ eagle are legal. Canada coins subsidiary silver tokens, and notes are issued by the Canadian Government exclusively, for 4, 2, 1, and $\frac{1}{4}$ dollars, no bank being allowed to issue notes for a less sum than \$5. The imperial yard, pound avoirdupois, gallon, and bushel are legal. But the hundred weight is legally declared to be 100 pounds and the ton 2,000 pounds, as in the United States.

MEXICO.

The monetary unit of Mexico is the peso of 100 centavos, and the money consists of $10\frac{1}{2}$ (weights) of pure silver to every $1\frac{1}{2}$ (weights) of "alloy" (probably pure copper), or it is of the unique fineness of 65 parts of pure silver in every 72 parts of money metal, $\frac{5}{8}$ being resolved decimally gives a fineness of .90277, etc.,

or exactly .902 $\frac{1}{2}$. The Statesman's Year Book gives the weight of a Mexican dollar as 27.073 grammes; $\frac{8}{9}$ of this is 24.44 $\frac{4}{9}$ grammes of pure silver, or the same as 24 $\frac{4}{9}$ grammes of pure silver. Norman, a man of genius and character, who always strives at accuracy, gives the weight of the Mexican dollar gross at 27.0643, but as the Bureau of American Republics also gives the gross weight of the Mexican dollar 27.073, we have adopted this weight.

Besides the silver peso are coined the $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{10}$ peso, as also nickel and copper 5, 2, and centavo pieces.

There are also coined gold 20, 10, 5, and 1-peso pieces, although nominally or popularly called gold pesos, they are worth more than silver pesos and pass or exchange not at their nominal value, but at a price as metal, in exchange for silver money. The true legal name for the \$10 Mexican gold piece is the hidalgo and the other pieces are double, half, etc., hidalgos. All these gold pieces are .875 fine. The 10-peso piece or hidalgo weighs 16.920 grammes .875 Au., and therefore contains 14.795 grammes Au. There were formerly coined the gold ouza or doblon (doubloon) or gold \$16 piece, and also in silver the real or 12 $\frac{1}{2}$ -cent piece, the medio (medio real) or 6 $\frac{1}{4}$ -cent piece, and the cuartillo (the little cuarto real) or 3 $\frac{1}{8}$ -cent piece, and the copper tlaco or claco to pass for half a cuartillo as also copper cents which are still coined. The grano, as a monetary weight, was $\frac{1}{8}$ of a peso or $\frac{1}{16}$ of a real. The metric system of weights and measures was introduced in 1884, and its use enforced by law in 1895, though practically the old Spanish weights are more usual.

The old weights for gold and silver and for ores were:—

1 quintal is 100 pounds or 4 arrobas and is 46.08 kilograms, a libra being 460.8 grams or .4608 kilogram. A quintal weighs 101.4, an arroba 25.357, and a libra 1.014 avoirdupois pounds respectively. A marco is 8 onzas or $\frac{1}{2}$ libra, or 4,608 granos; a tomino is 12 granos, and 6 tominos is an ochava or dracma of 72 granos; and 8 orcavas make an onza of 576 granos; 16 onzas make a libra of 9,216 granos. 20 granos is a French gramme or gram.

An avoirdupois pound is 453.5926 grammes.

Mexico has four mints. Most of the silver exported is shipped in the shape of dollars, which find their way to China and the smaller communities of Indo China and the eastern archipelago. The Mexican dollar is the best known coin in Asia. The other great silver coins were the rupee and rouble. These latter two have recently become names for gold instead of silver money units, and the silver rupee and rouble are now only token coins in gold monetary systems. Such has been the result of the maleficent heresy of gold monometallism, and nearly every supreme legislature in the world has, by its solicitous champions, been brought under the baleful influence. It is truly the upas tree of politics.

GUATEMALA.

Unit of money, the silver peso, 100 centavos, the same in weight as the old Peruvian silver sol, and same weights and measures as Peru. The metric system has been adopted, but has not come into full use, especially as to weights. By decree in October, 1898, the six banks of the country were empowered to arrange for the issue of notes to the amount of \$6,000,000,

which should be legal tender to the exclusion of bank bills and coin even in the case of debts contracted to be paid in silver. There is little metallic money in circulation. In 1899 silver was at a premium of 70 per cent, and gold rose as high as 430 per cent in emergencies. The old weights are those of Spain, libra 1.014 lbs. av. The peso weighs 25 grammes or 385.808 grains, same weight and composition as the French 5-franc piece.

HONDURAS.

Money unit the peso of 100 cents, weighing 25 grammes, same weight as that of Guatemala and Peru, and same weights and measures. The metric system has been introduced, but is not general. (See British Honduras at the end.)

NICARAGUA.

Silver standard, peso, 100 centavos, same weights and measures as Guatemala. The libra of Guatemala and Peru, etc., is the old libra of Spain.

SALVADOR.

In August, 1897, a law was passed adopting the gold standard. We do not know what the money unit is further than it is of gold, called a peso or dollar, and, according to the Statesman's Year Book, $6\frac{3}{4}$ of them go to a pound sterling. Weights and measures as in Guatemala and Peru. The silver dollar or peso weighed 25 grammes.

COSTA RICA.

The money unit is actually the silver peso, 100 centavos, .900 fine; weight, 25 grammes or 385.8 grains.

The silver in circulation amounts to about 350,000 pesos; paper in 1896, \$3,300,000; with specie reserve of in 1896, \$1,250,000.

The paper peso is worth about 35 cents. On Oct. 26, 1896, an act was passed for the adoption of the gold standard at the ratio of $26\frac{1}{4}$ to 1. The monetary unit will be called the colon and will be divided into 100 centavos. The colon will be of gold .900 fine, and weigh .778 grammes. The present silver coin will continue in circulation.

The new silver coinage will be .750 fine, and consist of fractions of the colon or 50, 25, 10, and 5-cent or centavo pieces, and will be legal tender up to 1 colon. Foreign gold will be legal, but not foreign silver. This project in 1898 had not yet been carried out. Steps are being taken toward its completion.

U. S. OF COLOMBIA.

The unit of weight is the peso, 100 centaves. .835 fine. It is divided into 10 reales, but the people in trade generally adopt the old system of 8 reales to the dollar. We do not know its weight. At Panama and Colon, where paper has not yet been introduced, the sol or Peruvian dollar is the money unit.

Coined pieces are the peso, 80, 50, 20, and 10-cent coins and in nickel 5 and $2\frac{1}{2}$ cents, also copper cents. The real of $12\frac{1}{2}$ cents and the 2, $\frac{1}{2}$, and $\frac{1}{4}$, are no longer coined. The metric system was introduced in 1857. In custom house business the kilogram, equal to 2.204 pounds avoirdupois, is the standard. In ordinary commerce the Colombian pound or libra, equal to 1.102 pounds av. or $\frac{1}{2}$ kilo to the standard.

1 quintal is 50 kilos or 110 libras; 1 arroba is $12\frac{1}{2}$

kilos or 25 libras; and the carga (originally mule load) is 250 pounds or 125 kilos. The Colombian vara is the measure of length, but the litre is the standard for liquid measure. The Colombian peso goes at the United States custom house for \$0.436.

VENEZUELA.

In July, 1896, it was enacted that the issue of paper money by the state should cease, and that no more silver or nickel should be coined without legislative enactment. The intention was to issue in future only gold coin and certificates representing gold in hand. The currency in 1896 was stated to consist of 12,000,000 bolivars in gold and 8,000,000 bolivars in silver. The old unit was the peso of 5 bolivars, the latter being the weight of a franc.

The bolivar is the new unit and the same as the franc. It is of gold and goes at 19.3 in United States customs. There are 5, 10, 20, 50, and 100-bolivar pieces.

BRITISH GUIANA.

British gold and silver coin is current, with a small circulation of "guilders," "half guilders," and "bits," which are local coins.

Dutch Guiana or Surinam same as Holland.

French Guiana same as France.

BRAZIL.

Professedly the standard is gold. Gold and silver coins have almost entirely disappeared, there being in actual circulation only inconvertible paper currency and nickel and bronze coins.

The money unit is the milreis. The 10 milreis gold piece weighs 8.9648 grammes $\frac{1}{11}$ fine and thus contains 8.2178 grammes of par fine gold.

The milreis is of the par value of 2s. 2½d. or 10 gold milreis are worth \$5.468. 1 milreis \$0.5468 United States.

The gold milreis is taken at the United States custom house at \$0.546. The metric system is used in all official departments. The libra of 1.012 av. pounds, however, is much employed.

In a kilogram of Au. there is sufficient Au. for the Au. of 1,216.875 milreis.

In gold and silver weight the old system is:—

24 graos (grains) = 1 escrupolo,	1.1953	gramme,	18.480	grains.
3 escrupulo = 1 oitava,	3.5859	"	55.341	"
8 oitavas = 1 onsa,	28.6875	"	442.7208	"
8 onsas = 1 marco,	229.5	"	3,541.7664	"
2 marcos = 1 libra,	459.0	"	7,083.5328	"

The libra above in the table is the same libra as was used for other commodities (there being no distinction as we have it between troy and avoirdupois; a marco or old mark is half a 16-ounce pound). The milreis of Brazil is not the same as the milreis of Portugal.

ECUADOR.

The money unit is the sucre of 100 cents; weight, 25 grammes .900 Au. The sucre is so called from the likeness of Marshall Sucre, a former president, imprinted on the coin. Other silver coins are 50, 20, 10, and 5-cent pieces. There are nickel 5, 1, and ½-cent pieces, and 2 and 1-cent bronze coins. A law passed in 1898, providing for a gold standard, will come in force in 1901. The new coinage will consist of the gold condor of 10 sucres, weighing 8.136 grammes and

containing 7.3224 grammes Au., the same as the British sovereign.

Silver coins are the silver sucre and its subdivisions and nickel and copper representing smaller quantities.

The metric system is legal, but the libra of 1.014 av. pounds is used. Ecuador has no mint, the coin of the country being minted in England, and the United States, and Peru.

PERU.

A decree was issued by the president of the republic on January 10, 1898, to give effect to the law of Dec. 29, 1897, establishing a gold currency. The national gold coin, the *libra*, is of the same standard and weight as the pound sterling.

The gold coin, the *libra*, is equal to 10 sols, equal to the British sovereign.

Libra is also the name for a weight corresponding to the pound, just as in England there are pounds sterling and pounds avoirdupois.

Silver coins are the sol, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{10}$, and $\frac{1}{20}$ sol. Bronze coins are 1 and 2 centavo pieces. The silver sol weighs 25 grammes.

The French system of weights and measures is legal, but has not come into general use except for customs and tariff. The old weights are Spanish ones,—libra, 1.014 lbs. av. The old silver sol weighed 25 grammes .900 fine.

BOLIVIA.

Silver standard, money unit is the silver boliviano or dollar or peso of 100 centavos, 25 grammes, .900 Ag., worth in United States customs \$0.436. Other coins

are 50, 20, 10, and 5-cent pieces, called half boliviano, peseta, real, and half real. No gold pieces have been coined for many years. Notwithstanding the large production of silver, there is a scarcity of coin, for the metal not at once exported is minted and leaves the country as coin. The mint coins now only half bolivians and 20-cent pieces, 8 per cent lighter than the old bolivianos. There are also 10 and 5-cent nickel coins. In 1899 nickel coin was minted for Bolivia at Paris to the nominal value of \$400,000 bolivianos.

The metric system is used by the administration, but the old Spanish system is also employed. The marco weight for mineral produce is equal to .507 av. pounds, and the libra to 2 marcos, 1.014 pounds.

CHILE.

According to the Act of 1895, the coinage of Chile is as follows:—

Gold coins are 20, 10, 5-peso pieces, called the colon or condor, the doblon, and the escudo.

The 10-peso piece weighs 5.99103 grammes $1\frac{1}{2}$ Au., and therefore contains 5.49178 grammes of Au.

Silver coins are the peso, weighing 20 grammes .835 fine, and the 5th, 10th, and 20th peso. Bronze coins are the 1 and 2-centavo pieces. The monetary unit is the twentieth part of a colon or .599103 grammes .916 Au., containing .549178 grammes Au. It is called the gold peso.

Metric system is established, but old Spanish standards used to some extent. The old Chilian silver peso weighed 25 grammes .900 Ag.

PARAGUAY.

Very much in debt, a paper money in circulation.

Unit the dollar or peso of 100 centavos. The amount of paper money in circulation December, 1898, was 9,785,000 pesos. Gold at a premium of 740 per cent. Do not know the weight of the money unit nor its material. The old Spanish weights and measures are in use.

ARGENTINE REPUBLIC.

The paper currency in September, 1899, amounted to 295,165,957 pesos. In 1899 a bill was approved by Congress for converting the paper dollar at 4 cents gold.

The 5-peso gold piece weighs 8.0645 grammes .900 Au., and contains 7.25805 grammes Au.

The standard is gold, but the country for some years has been "financially embarrassed," and has not been able to fulfil her obligations or "convert" her paper. The silver coins are the peso and subdivisions and nickel and copper. The currency in circulation is paper or bronze and nickel. When paper gets so that the money you get for it has less value than the melted silver token, it even causes token silver to be taken off the market, which is no better as a "legal tender for debt," but, as a material, has of itself a very important value which is not the case with paper.

The metric system is compulsory in the Argentine.

URUGUAY.

There is no Uruguayan gold coin in circulation, but the monetary standard is gold, the theoretical gold coin being the *peso nacional*, weighing 1.697 grammes $\frac{11}{12}$ or .917 fine. The law of June 23, 1862, authorized the coinage of the doblon or 10-peso gold piece, but as yet only foreign gold is in circulation.

The silver peso weighs 25 grammes .900 fine, divided into halves, fifths, and tenths. There are bronze coins, 5, 2, and 1-centesimo pieces. The metric system is official. The libra of the old system same as Mexico, 1.014 lb. av.

BRITISH HONDURAS.

United States gold coin was adopted as the standard money in 1894, and, of course, the money unit is the United States dollar. There is a local subsidiary silver token coinage for \$200,000, and also a paper currency.

SANTO DOMINGO.

On July 1, 1897, the United States gold dollar was adopted as the money unit, and United States gold is the money of the republic. The finances are demoralized, and only silver and paper are in circulation. The government is unable to "convert," so it is that this token silver and paper currency is "depreciated" and fluctuates.

HAITI.

The money unit is the *gourde* or dollar, being the same as five francs. The silver *gourde* or token coin for this money unit weighs 25 grammes. However, on account of the not thoroughly sound finances of the country, it is subject to some fluctuation, as expressed in American gold coin. It usually goes for about 1.17 *gourde* to one United States dollar, although its value should be, or rather the value which it should signify is five times 19.3 cents, or ninety-six and one-half cents; and it is quoted by the United States Treasurer at \$0.965. The Haytian paper is considerably more depreciated.

CUBA.

Spanish and American money.

RATIO OF SILVER TO GOLD.

Year.	0	1	2	3	4	5	6	7	8	9
168.....								14.94	14.94	15.02
169.....	15.02	14.98	14.92	14.83	14.87	15.02	15.00	15.20	15.07	14.94
170.....	14.81	15.07	15.52	15.17	15.22	15.11	15.27	15.44	15.41	15.31
171.....	15.22	15.29	15.31	15.24	15.13	15.11	15.09	15.13	15.11	15.09
172.....	15.04	15.05	15.17	15.20	15.11	15.11	15.15	15.24	15.11	14.92
173.....	14.81	14.94	15.09	15.18	15.39	15.41	15.18	15.02	14.91	14.91
174.....	14.94	14.92	14.85	14.85	14.87	14.93	15.13	15.26	15.11	14.80
175.....	14.55	14.39	14.54	14.54	14.48	14.68	14.94	14.87	14.85	14.12
176.....	14.14	14.54	15.27	14.99	14.70	14.83	14.80	14.85	14.80	14.75
177.....	14.62	14.66	14.62	14.62	14.62	14.72	14.55	14.54	14.68	14.80
178.....	14.72	14.78	14.42	14.48	14.70	14.92	14.96	14.92	14.65	14.75
179.....	15.04	15.05	15.17	15.00	15.37	15.55	15.65	15.41	15.59	15.74
180.....	15.68	15.46	15.26	15.41	15.41	15.79	15.52	15.43	15.08	15.96
181.....	15.77	15.53	15.11	15.25	15.04	15.26	15.28	15.11	15.35	15.33
182.....	15.62	15.95	15.80	15.84	15.82	15.70	15.76	15.74	15.78	15.78
183.....	15.82	15.72	15.73	15.93	15.73	15.80	15.72	15.83	15.85	15.62
184.....	15.62	15.70	15.87	15.93	15.85	15.92	15.90	15.80	15.85	15.78
185.....	15.70	15.46	15.59	15.33	15.33	15.38	15.38	15.27	15.33	15.19
186.....	15.29	15.50	15.35	15.37	15.37	15.44	15.43	15.57	15.59	15.60
187.....	15.57	15.57	15.63	15.92	16.17	16.59	17.88	17.22	17.94	18.40
188.....	18.05	18.16	18.19	18.64	18.57	19.41	20.78	21.13	21.99	22.09
189.....	19.75	20.92	23.72	26.70	32.58	31.60	30.66	34.28	35.03	.....

The reader will readily understand this table by bearing in mind that the first three figures of the year are found in the column at the left and the fourth at the top of some one of the other columns. At the intersection is found the ratio, just as is found the product of any two numbers in a multiplication table, for instance, take the year 1691, the ratio is put down as 14.98 to 1.

For the years 1687 to 1832 these numbers were taken from the tables of A. Soetbeer; from thence to 1878, from Pixley and Abell's tables; and from thence by the United States mint. We know of no other such table of prices brought down through the centuries, and the above prices were not prices of free conditions. The

above may be considered as fairly the world's average for modern times, say from the beginning of this century or thereabout, and still better as we come down later, say particularly from the year in which the Atlantic telegraph, from America to Europe, was completed, which was in 1866, though the telegraph was invented in 1832.

In early times, as we have indicated, the divergences in different countries were far greater than at present. When Japan was first opened to western commerce, the ratio in that country between silver and gold was about 4 to 1. And, owing to this fact, immense fortunes were made by commercial pioneers. The price of silver now in 1900 is about 60 cents per ounce, which gives the ratio 34.45 to 1. Divide \$20.67, which is the price of an ounce of pure gold, by \$0.60, or divide 20.67, which is the price in dollars of an ounce of pure gold, by 0.60, which is about the price in dollars of an ounce of pure silver in New York City at the present time.

PRACTICAL.

Faith without works is dead, and we believe that men who have clear convictions should assert them or live for them, for upon such character the hope of the world is founded.

We know that all good American citizens are of the same "politics" on this proposition, viz., that they desire the welfare of the people of the United States.

Such as have hitherto politically sustained the gold standard would do well to carefully investigate the reasoning that should lead to such action.

Intelligent research (we believe) must alter this mind, and consequently this vote. Wherefore let those who think that in this matter they stand upon solid ground, take care lest they be sinking into a mire of error, perhaps taking future generations with them, for any public sin or error is visited upon, or is maleficent to, at least as many generations as have the misfortune to live under it.

The money question is a question that is not yet settled, and "a question is never settled until it is settled right." When we "know the truth the truth will make us free." It is to be hoped that American citizens will search for the truth upon the money question, so that we may adopt it, and be free of this question in active "politics," as we so happily are of the religious question and some others. This will give us room for still further advance in other directions, for there are other political battles to be won, we hope in peace, for Peace hath her victories fully as noble as those of war.

ANNOUNCEMENT.

This book may be obtained by sending one dollar (\$1.00) to George Reed, 10 Stevenson St., San Francisco. *Ask your dealer for it.* (Discount to the trade.)

This book makes plain a much-muddled public question, bringing it into harmony with indestructible common sense or scientific principles whereby it may be justly settled, thus making room for the serious consideration of other questions of vast importance to the people.

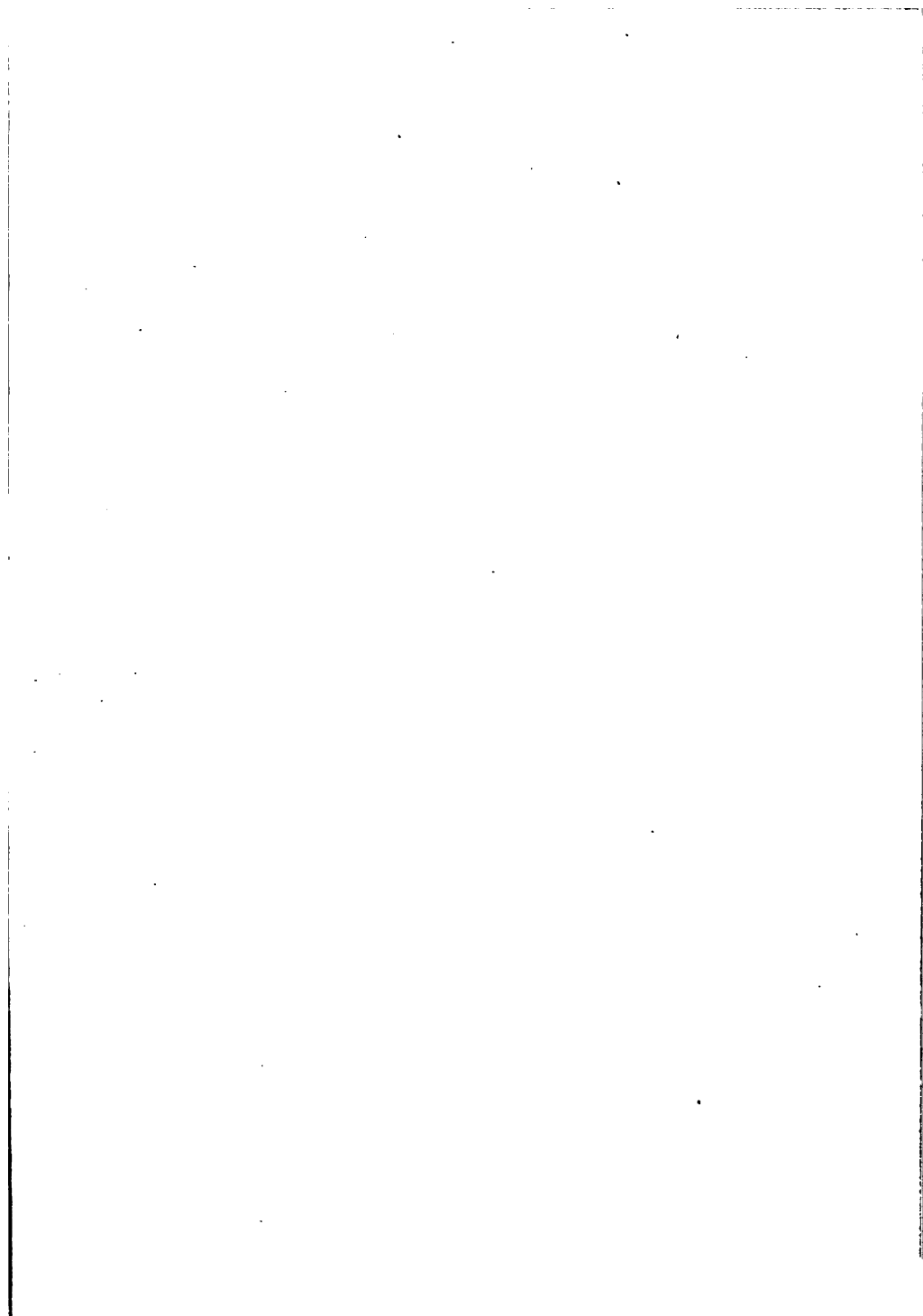
Every man who desires his country's welfare, the emancipation of slaves, the expansion of truth, or the imperialism of justice, should procure a copy. The natural result of these ideas is of tremendous practical importance, and they should be universally circulated.

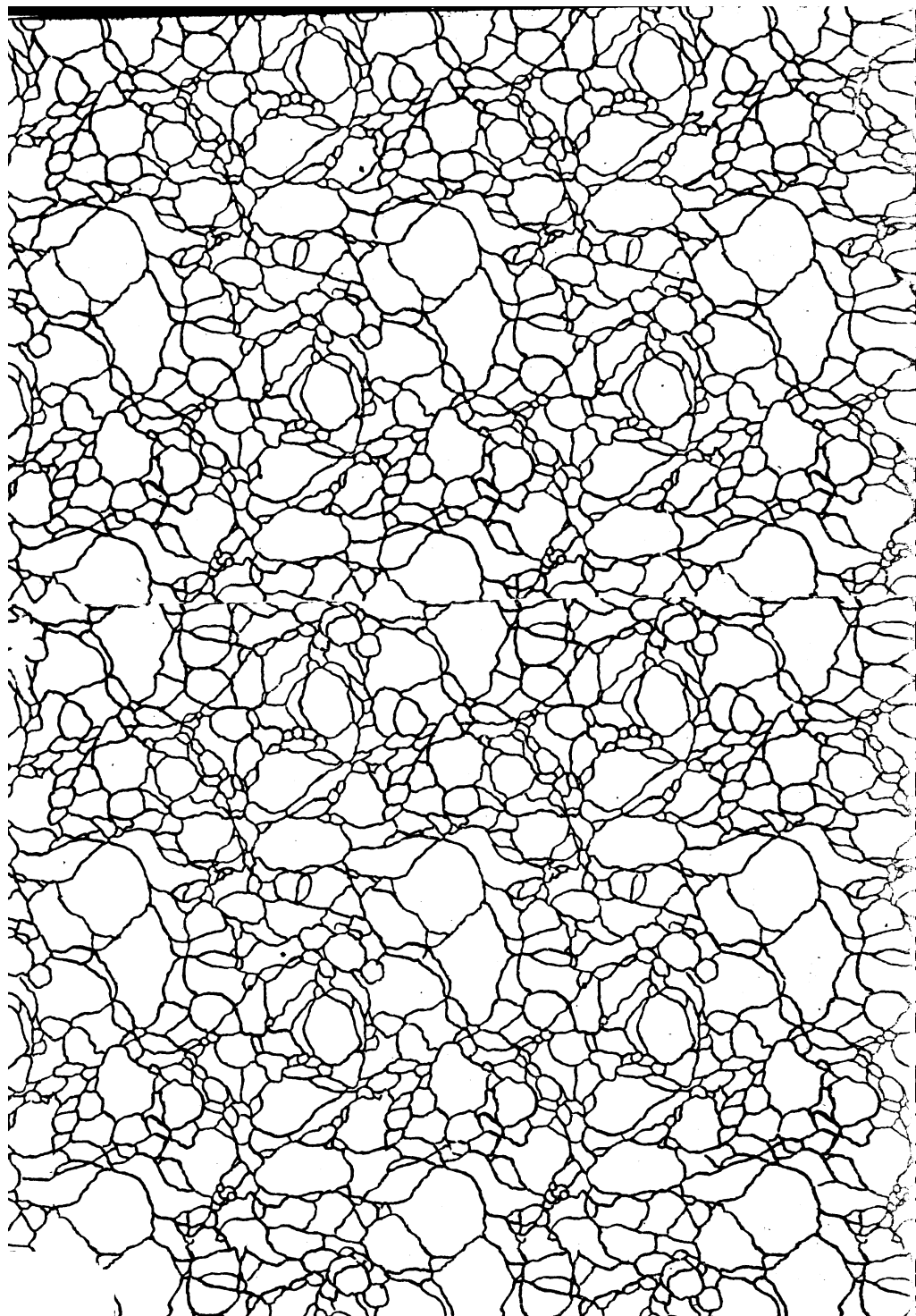
We hope the reader may incline to become a factor in this propaganda, and, if so, beg him to help us, and ask his earnest endeavor toward the dissemination of these truths.

If we are properly encouraged, we shall accomplish what we intend, which is the destruction of the gold standard theory and practise in the United States and in the world and the speedy adoption of a silver money in the United States. The theory of the gold standard is an arch in the circle that upholds the dome of modern oppression; to destroy it is the prelude to the destruction of the whole fabric; or, by other comparison, it is the reveille in the happy dawn of a new day, when Might shall protect Right, or Truth shall sit upon the right hand of Power.

————— SL

There is more real information in "Valics" upon the subjects of value and money than can be found in all other works collectively that have heretofore been published.





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